FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

OXIFORD SQUARIE

"A HOWARD COUNTY GREEN NEIGHBORHOOD"

Saint Margarets Boulevard (Sta. 12+52.60 to Sta. 17+23.98)

Zoning: TOD

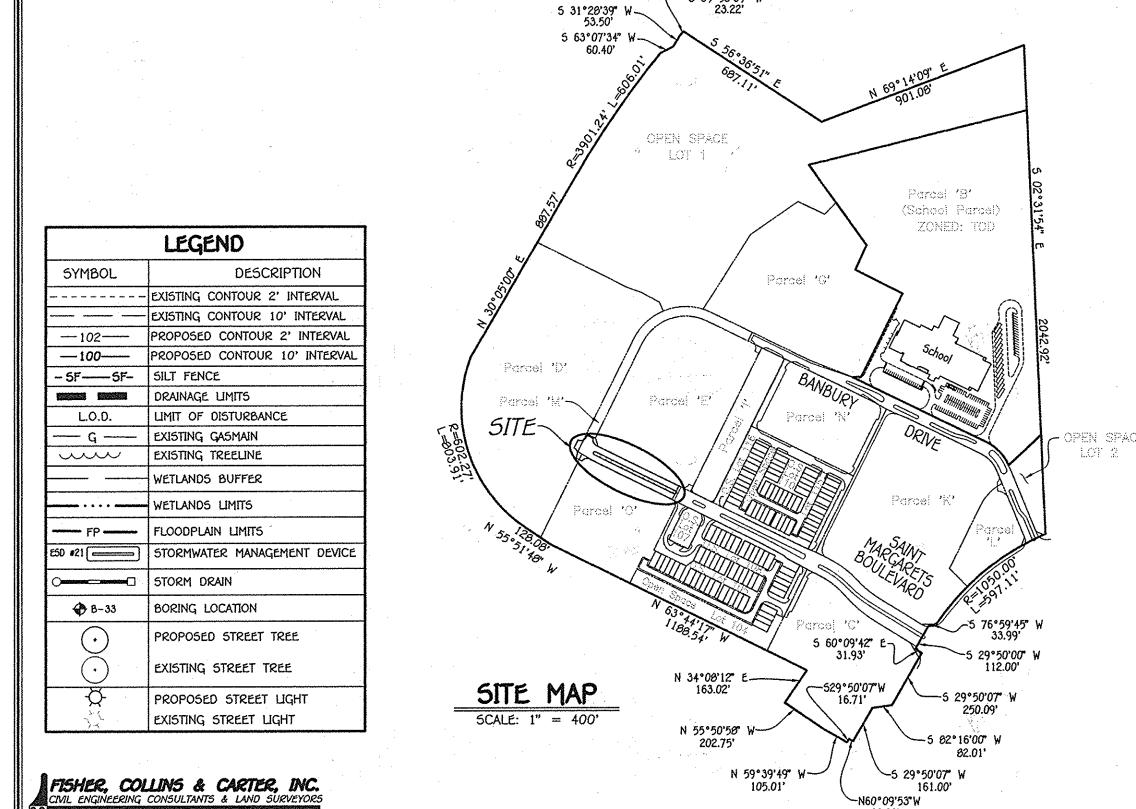
Tax Map: 38 Parcel: 761

	ROADWAY INFO	ORMATION CHA	टा	
ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
SAINT MARGARETS BOULEVARD	MAJOR COLLECTOR	30 M.P.H.	25 M.P.H.	64'

		16.3	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `
	STREET	LIGHT	CHART
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
SAINT MARGARETS	12+46 12+47 16+42 16+42 17+20	36.0' R 36.0' L 32.5' L 32.5' R 20' R	175 watt Metal Halide Tear Drop fixture mounted at 20' On a 23' black fiberglass pol With shroud using a 4' arm
BOULEVARD	13+11 13+14 13+69 13+94 14+74	35.5' R 35.5' L 35.5' R 35.5' L 35.5' R 35.5' L	GRACE ACORN POST TOP FIXTURE
	15+46 15+51 17+06	35.5' R 35.5' L 30.0' L	SHROUD

£ 2.	TRAFFIC COI	VTROL	5IGN5	
ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
	12+60	2' R	KEEP RIGHT W/ OBJECT MARKER	R4-7 OM1-1
	14+04	5' R	ROAD CLOSED 300 ft.	W20-3
	14+04 - MOUNTED TO STREET LIGHT	35' R	ROAD CLOSED 300 ft.	W20-3
	15+50	5' L	SPEED LIMIT 25 MPH	R2-1
SAINT MARGARETS BOULEVARD	16+40	2, r	KEEP RIGHT W/ OBJECT MARKER	R4-7 OM1-1
	17+25 - MOUNTED TO BARRICADE		ROAD CLOSED	R11-2
	17+25 - MOUNTED TO BARRICADE		ROAD CLOSED	R11-2
		٠	·	
	* 14+04	5' R	CROSS ROAD W/ ROAD NAME PANELS	W2-1
 - 	* 14+04 - MOUNTED * TO STREET LIGHT	35' R	CROSS ROAD W/ ROAD NAME PANELS	W2-1

* NOTE: THESE SIGNS WILL BE PLACED AT THE SAME LOCATION AS THE "ROAD CLOSED" WARNING SIGNS ARE INSTALLED. TRAFFIC ENGINEERING WILL DETERMINE WHEN THE SIGN CHANGE OVER WILL OCCUR. CALL 410-313-5752.



, of	TO THE STATE OF THE PARTY OF TH	
	Janes de la constant	
***************************************	To Ho. co.	
,	TOO CO. CO. MOOD ** 38CA A STANK	
,	Patr. Lunder too	
	Howard Printer Co.	
	Anne d'all de la	
L. .	REFER TO HOWARD CO. ADC MAP 5055, 8- VICINITY MAP	1
	SCALE: 1" = 2000'	

First Election District Howard County, Maryland

Owner	Developer
Kellogg-CCP, LLC c/o Dāvid P. Scheffenācker, Jr., Mānāging Member 2330 West Joppā Roād, Suite 190 Lutherville, Māryland 21093—4614	Preston • Scheffenacker Properties 2330 West Joppa Road, Suite 19 Lutherville, Maryland 21093-4614 Ph# 410-296-3800

Ph# 410-296-3800

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIMSION AT 410-313-1860 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- 4. This subdiment plan is subject to the amended fifth edition of the subdiment and land development regulations and the 2004 zoning regulations per council bill no. 45-2003 and the zoning regulations as amended by council bill no. 75-2003 and the comp lite zoning regulation amendments effective 7/20/06. Development or construction on these lots or parcels must comply with

APPROVED: DEPARTMENT OF PUBLIC WORKS

7/29/14

CHIEF, BUREAU OF HIGHWAYS

- 5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 38DA AND NO. 38GA
- 6. SUBJECT PROPERTY ZONED TOD PER Z8-1006M DATED 9/13/10 AND ZRA-140 DATED 8/1/12.
- 7. BACKGROUND INFORMATION:
- a. Subdivision Nation Carole b. Tax Map No.: 38 & 44 c. Parcels No5.: 761 d. Zoning: Tod e. Election district: First
- f. Area of this submission = 5.02 acres (l.o.d.) g. Number of parcels: 1
- h. NUMBER OF OPEN SPACE LOTS: N/A
- I. AREA OF PARCELS: 0.099 ACRES J. AREA OF OPEN SPACE LOTS: N/A
- J. AREA OF OPEN SPALE LUIS: N/A
 k. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.671 ACRES
 l. PREVIOUS FILE NUMBERS: 5-87-066, P-87-070, F-89-085, 50P-89-275, F-90-125, F-91-069, 50P-90-041, F-93-023, 50P-93-055, ZB-1086M, WP-11-130, F-11-057,
 WP-11-147, 5-11-001, ECP-11-046, F-12-026, F-13-095, F-13-108, 5-14-001, 50P-13-068 & 50P-14-019. m. Area of Floodplain = none with this submission

 n. Area of 25% or greater slopes = none with this submission
- A. AMENITY REQUIREMENTS: T.O.D. DEVELOPMENT SHALL INCLUDE AN AMENITY AREA PER SECTION 127.4.F.I. OF THE ZONING REGULATIONS AND THE ROUTE 1 MANUAL.
- b. Amenity area required: 10.0. Acres for the entire project (101.609 x 10%)
 b. Total amenity area provided: = 1.57 dc.* under 50p-13-060 + 1.07 ac.* under 50p-14-019 = 2.64 dc.*

 0.00 dc. under this submission
 c. Total amenity area proposed under 5-14-001 = 15.7 dc.*
- 9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-120.
- 10. Noise study was prepared by mars group dated november, 2009. The 650ba noise contour line drawn on this plan is advisory as required by the Howard County design manual. Chapter 5, revised february, 1992, and cannot be considered to exactly locate the 650ba noise exposure. The 650ba noise line was established by howard county to alert developers, builders and future residents that areas beyond this threshold may exceed generally accepted noise levels established by the U.S. department of housing and urban development.
- 12. SOILS INFORMATION TAKEN ECS SOIL SURVEY DATED NOVEMBER 2, 2009. THE PROPERTY LIES WITHIN THE DEEP RUN TRIBUTARY TO THE PATAPSCO RIVER WATERSHED (2130906). MOST OF THE PARCEL "Q" CONSISTS OF OVERGROWN FIELD HABITAT THAT DEVELOPED ON A PORTION OF THE SITE THAT WAS MASS GRADED IN THE LATE 1980'S. IT IS DUE TO THIS PREVIOUSLY MASS GRADED CONDITION THAT THE NORMAL HOWARD COUNTY SOIL SURVEY MAPS DATED JULY 1969 DO NOT APPLY. AS A RESULT OF THIS SITE CONDITION, THE OWNER/DEVELOPER HAVE CONTRACTED ECS-MID ATLANTIC, LLC OF HANOVER, MARYLAND. THE SOIL REPORT IS DATED NOVEMBER 2009 WITH AN ADDENDUM DATED FEBRUARY 2010 THAT SUMMARIZED THE SOIL GROUPS REQUIRED FOR THIS SWM REPORT.

- 15. THERE IS ONE AREA OF STEEP SLOPES LOCATED ON THE OXFORD SQUARE PROPERTY, HOWEVER THIS AREA IS NOT WITHIN THE LIMITS OF THIS SUBMISSION.
- 2010. RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A STONE RESERVORS, WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED BY MICRO BIO-RETENTION FACILITIES. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE ALL STONE RESERVOR AND MICRO-RETENTION STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A. OR COMMERCIAL ASSOCIATION. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL BE PRIVATELY OWNED AND MAINTAINED BY OXFORD SQUARE COMMERCIAL ASSOCIATION.
- 17. NO SPECIMEN TREES EXIST ON-SITE WITHIN THIS SUBMISSION.
- 10. NO FLOODPLAIN EXISTS WITHIN THIS SUBMISSION.
- 19. THE FOREST CONSERVATION ACT REQUIREMENTS FOR THIS PROJECT WERE ADDRESSED BY F-12-026.
- 20. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MARCH 17, 2011 AND APPROVED UNDER 5-11-001 & ECP-11-046.
- 21. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- 23, STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME II (2006), SECTION 5.5.A. A MINIMUM SPACING OF 20' SHALL BE
- MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE
- a) the RI-I (Stop) signs and the street name sign (sns) assemblies for this development must be installed before the base paving is completed. b) THE TRAFFIC CONTROL DEVICE LOCATIONS (SIGNS & PAVING MARKINGS) SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION (410-313-5752) PRIOR TO
- C) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MIGHUTCD) d) all sign posts used for traffic control signs installed in the county right—of—way shall be mounted on a 2" galvanized steel, perforated "quick punch" square tube post (14 gauge) inserted into a 2—1/2" galvanized steel, perforated, square tube sleeve (12 gauge) — 3" long, the anchor shall not extend more than two "quick punch" holes above ground level a galvanized steel. Pole cap shall be mounted on top of each post.
- 25. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED MARCH 2011. PER THIS STUDY, ONCE THE TOTAL WEEKDAY EVENING PEAK HOUR TRIP GENERATION EXCEEDS 1100 TRIPS, THE
- 27. ON JANUARY 13, 2012, A LETTER WAS RECEIVED FROM HOWARD COUNTY PLANNING AND ZONING REGARDING A DESIGN MANUAL WAIVER FOR THE FOLLOWING SECTIONS OF DMV III;
 2.2.G (BUS STOP TURNOUT LANE), SECTIONS 2.3.A.1.a (MINIMUM RADIUS BASED ON DESIGN SPEED), 2.3.A.3.c (HORIZONTAL DESIGN/DIVIDED HIGHWAYS), 2.4.B.1&2 (RICHT-OF-WAY WIDTH & PAVEMENT WIDTH AND CROSS SLOPE), 2.5.B.1&4 (INTERSECTION SPACING & MINIMUM CURVATURE), 2.6.D. (SPACING AND CORNER CLEARANCE), 2.9.B. (OVERFLOW GUEST PARKING), 2.9.C. (24' DIVE LANE WIDTH), AND 2.10.E. (REFUSE STORAGE AREA LOCATION). THE FOLLOWING ARE THE RESPONSES AND CONDITIONS OF APPROVAL FROM PUBLIC WORKS, LAND DEVELOPMENT AND DEVELOPMENT ENGINEERING:
- (1) SECTION 2.2.G, BUS STOPS APPROVED FOR STA. 10+00 (SAINT MARGARETS BLVD.) AND STA. 11+75 (BANBURY DRIVE)
 (2) SECTION 2.3.A.1.a., DESIGN SPEED/MINIMUM RADII REQUEST TO REDUCE THE DESIGN SPEED FROM 40 MPH TO 30 MPH (POSTED SPEED = 25 MPH) WAS APPROVED. THE REQUEST TO REDUCE MINIMUM CENTERLINE RADII WAS APPROVED FOR SAINT MARGARETS BLVD., STA. 3+20, 4+50 AND 19+50. FOR BANBURY DRIVE, STA. 4+00, THE SIGHT DISTANCE EASEMENT WAS ADDED, GAING APPROVAL FOR THIS LOCATION. FOR BANBURY DRIVE, STA. 19+25, THE DECISION WAS APPROVED SUBJECT TO THE REQUIRED SIGHT DISTANCE EASEMENT BEING ADDED AS PART OF PHASE 2.
 (3) SECTION 2.3.A.3.C., DAIDED ROADWAYS REQUEST MODIFICATIONS TO ALLOW DAIDED ROADWAY ON A MAJOR COLLECTOR AND REDUCTION OF MEDIAN WIDTH FROM 16' TO 14'. THESE REQUESTS ARE ACCEPTABLE WITH THE
- (4) SECTION 2.4.B.1., RIGHT-OF-WAY WIDTHS-REQUEST A VARIABLE RIGHT-OF-WAY WIDTH TO EXTEND ONE FOOT BEHIND FACE OF CURB. THIS WAS APPROVED CONTINGENT ON PROVIDING AN EASEMENT ALONG SAINT MARGARETS BLVD. AND AN EASEMENT ALONG BANBURY DRIVE. THE EASEMENTS WERE PROVIDED.

 (5) SECTION 2.4.B.2., PAVEMENT WIDTHS AND CROSS SLOPE—REQUEST THAT SAINT MARGARETS BLVD. HAVE LANE WIDTHS OF 16' AND ALL OTHER ROADS HAVE A TOTAL WITH OF 18' FOR ONE WAY AND 22' FOR TWO WAY TRAFFIC. APPROVED FOR ALL LOCATIONS EXCEPT THREE ALONG BANBURY DRIVE AT STA. 15+75, THE REFUGE ISLAND WAS PROVIDED. THE OTHER TWO LOCATIONS NEAR THE TRAFFIC CIRCLE AND COMMUNITY CENTER ARE (5–11–001). And approved. (7) Section 2.5, table 2.09, curb fillet radius—request a reduction in the minimum curb fillet radii was approved for saint margarets lane and banbury drive
- (8) SECTION 2.6.D., DERVEWAY SPACING AND CORRER CLEARANCE-REQUEST THAT THE CORNER CLEARANCE BE REDUCED FROM 75' TO 25' AND SPACING BETWEEN INTERSECTIONS BE REDUCED FROM 250' TO 100'. THE SPACING BETWEEN INTERSECTIONS REDUCTION TO 100' IS ACCEPTABLE. THE CORNER CLEARANCE REDUCTION TO 25' IS ACCEPTABLE. (9) SECTION 2.9, TABLE 2.11, OVERFLOW/QUEST PARKING-REQUEST THAT OFF-SITE PARKING BE REDUCED FROM 2.3 SPACES PER DWELLING UNIT TO 2.0 SPACES PER DWELLING UNIT. THIS REQUEST WAS DEFERRED UNTIL FUTURE SITE PLAN PHASE ON A PARCEL BASIS. FOTORE SITE PLAN PRICE ON A PARCEL BASIS.

 (10) SECTION 2.10.E., SOLID WASTE STORAGE LOCATION—REQUEST THAT THE DISTANCE FROM A CENTRALIZED REFUSE STORAGE AREA TO A MULTI—FAMILY AREA BE INCREASED FROM 200' TO 300'. APPROVAL WAS GRANTED

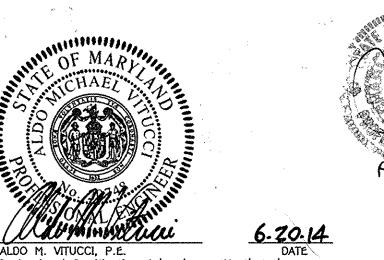
 (11) SECTION 2.9.C., OFF STREET PARKING LOTS—REQUEST THAT THE MINIMUM AISLE WIDTHS BETWEEN ROWS OF PARKING BE REDUCED FROM 24' TO 22'. DED HAS DENIED THIS REQUEST. (12) Section 5.5.A.2, street light location has been approved based on meetings with B.G.&e. and howard county opw — traffic engineering
- 28. IN ACCORDANCE WITH THE DESKIN MANUAL WAVERS OUTLINED IN GENERAL NOTE No. 27 FOR REDUCED PUBLIC ROAD R/W. ALL PUBLIC ROADS SHALL PROVIDE A "PUBLIC SIGNAGE, STREET LIGHT AND UTILITY FASEMENT 29. Stream and weitand restoration and the habitat management plan shall be implemented within 3 years of final approval of the site development plan associated with construction of the 190th residential unit. A copy of the joint federal/state application for authorization of regulated activities associated with the stream and weitand restoration and habitat management plan shall be
- submitted to DPZ as part of the site development plan application associated with construction of the 1901s residential unit. 30. THIS PLAN IS SUBJECT TO WAVER PETITION WP-11-147 TO WAVE SUBSECTIONS 16.144(4) AND 16.144(4) OF THE HOWARD COUNTY CODE. THIS ACTION RELIEVES THE REQUIREMENT TO SUBMIT A PRELIMINARY SUBDIVISION PLAN OR A PRELIMINARY EQUIVALENT SKETCH PLAN IN ORDER TO RECEIVE A GREEN NEIGHBORHOOD ALLOCATION, WAIVER PETITION WP-11-147 WAS APPROVED ON APRIL 27, 2011 BY THE DEPARTMENT OF PLANNING, AND ZONING.
- 31. PLAN IS SUBJECT TO WP-12-109 WHICH THE PLANNING DIRECTOR APPROVED ON JUNE 5, 2012 TO WAVE SUBSECTIONS 16.120(C)(1), 16.121(E)(1) AND 16.134(A) WHICH REQUIRES ALL COMMERCIAL INDUSTRIAL AND APARTMENTS TO HAVE A MINIMUM OF 60' OF FRONTAGE ON A PUBLIC ROAD, OPEN SPACE LOTS WILL HAVE FRONTAGE ON A PUBLIC ROAD AND THE DEVELOPER SHALL PROVIDE FOR THE CONSTRUCTION OF SIDEWALKS. WAIVER APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

 A PETITIONER SHALL SUBMIT A FINAL PLAN PROVIDING NO LESS THAN 60 FEET OF FRONTAGE ON AN APPROVED PUBLIC ROAD TO COMMERCIAL AND APARTMENT PARCELS PRIOR TO OR CONCURRENT WITH THE
- SUBMISSION OF A SITE DEVELOPMENT PLAN FOR COMMERCIAL OF RESIDENTIAL DEVELOPMENT OF SAID PARCELS.

 B. PETITIONER SHALL PROVIDE NO LESS THAN 40 FEET OF FRONTAGE ON AN APPROVED PUBLIC ROAD TO OPEN SPACE LOT 1 FOR ACCESS BY PEDESTRIANS AND MAINTENANCE VEHICLES UPON SIGNATURE APPROVAL OF THE ROAD CONSTRUCTION DRAWINGS WHICH INCLUDE THE TRAFFIC CIRCLE INTERSECTION OF BANBURY DRIVE AND THE PRIVATE ROAD (ROAD "B") LOCATED ON PARCEL "I" (FINAL PLAN F-12-026). A DEVELOPER AGREEMENT SHALL BE SUBMITTED AND FINANCIAL SURETY POSTED FOR CONSTRUCTION OF SAID PUBLIC ROAD NO LATER THAN 60 DAYS FOLLOWING SUBMISSION OF THE ASSOCIATED ROAD CONSTRUCTION DRAWING THE ASSOCIATED ROAD CONSTRUCTION DRAWING ORIGINALS. THE ASSOCIATED ROUN CONSTRUCTION DESIGNATION OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE COMMERCIAL, OR RECREATIONAL USE ABUTTING SAINT MARGARETS LANE, SUBMIT A REDLINE REVISION OF FINAL PLAN F-12-026 TO INCLUDE SIDEWALK IMPROVEMENTS ON SAINT MARGARETS LANE AS REQUIRED BY SECTION 16.134 AND THE DESIGN MANUAL.
- P-DITIONER SHALL, UPON APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE, COMMERCIAL, OR RECREATIONAL USE ABUTTING BANBURY DRIVE, SUBHIT A REDLINE REVISION OF FINAL PLAN F-12-026 TO INCLUDE SIDEWALK IMPROVEMENTS ON BANBURY DRIVE AS REQUIRED BY SECTION 16.134 AND THE DESIGN MANUAL.

 E. PETITIONER SHALL, UPON APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE, COMMERCIAL, RECREATIONAL, OR INSTITUTIONAL USE WITHIN THE LIMITS OF SKETCH PLAN 5-11-011, SUBMIT A REDLINE REVISION OF THE APPROPRIATE FINAL ROAD CONSTRUCTION DRAWING(S) TO THE DEPARTMENT OF PLANNING AND ZONING TO INCLUDE SIDEWALK IMPROVEMENTS ON BOTH SIDES OF COCA COLA DRIVE AS required by section 16.134 and the design manual, including connection of the existing sidewalk to the intersection of park circle drive and coca cola drive.

33. THE MARYLAND AVAITON ADMINISTRATION (MAA) APPROVED THIS PLAN ON JANUARY 15, 2014 FOR SEDIMENT AND EROSION CONTROL, STORMMATER MANAGEMENT AND LANDSCAPING, PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT, AN APPROVED AIRPORT ZONING PERMIT MUST BE OBTAINED. THE MAA ALSO DETERMINED THAT ALTHOUGH OUTSIDE THE AIRPORT NOISE ZONE, OCCUPANTS OF THIS SUBDIMISION WILL EXPERIENCE NOISE FROM AIRCRAFT OVERFLIGHTS AND OTHER OPERATIONS DUE TO THE PROXIMITY OF THIS SITE TO THE AIRPORT. THE MAA HAS PREVIOUSLY APPROVED 5—11—001.

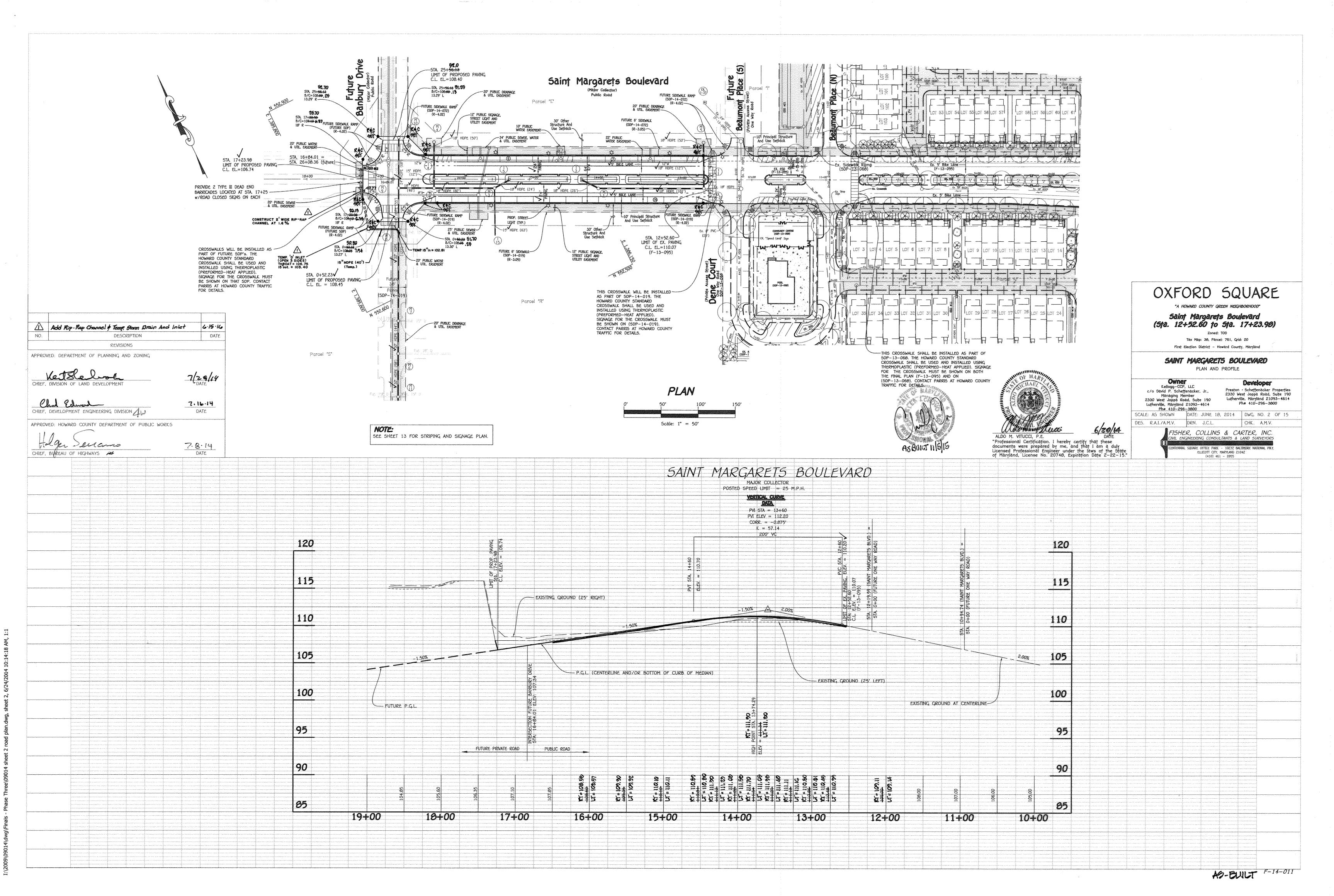


documents were prepared by me, and that I am a duly

OXFORD SQUARE "A HOWARD COUNTY GREEN NEIGHBORHOOD"

Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

> Tax Map: 30, Parcel: 761, Grid: 20 First Election District - Howard County, Maryland Date: June 18, 2014



BIO-RETENTION SECTION IN MEDIAN ALONG

SAINT MARGARETS BOULEVARD @ 2" STAGE ONE WEIR NO SCALE

PONDING - CHECK DAM ----INITIAL FLOW **V**_____ 6" STORAGE HEIGHT - RIVER ROCK - RIVER ROCK 12"W x 3'L x 12"D 12"W x 3'L x 12"D PROFILE ROADWAY L6" STORAGE 12" ANCHOR -(TYPICAL) BIO-RETENTION CELL 6" X 11" X 11'-6" CONCRETE CONCRETE CHECK DAM DETAIL CHECK DAM

Approved: Department Of Planning And Zoning Kest Sherlwol 7/29/14 Chief, Division Of Land Development Chief, Development Engineering Division 7.16.14 Date Approved: Howard County Department Of Public Works 7.8.14 Holde Decamo **REVISIONS** DESCRIPTION DATE

品牌 艾德国 LIMITS OF ISLAND -PROP. 2" DIA. STAGE ONE WEIR W/ DRAIN COVER (TYPICAL) (SET TOP OF PIPE 6" ABOVE BOTTOM) EXISTING GROUND AT CENTERLINE--PROP. GRADE TOP OF CURB 112 109 109 106 103 -6" PVC, SCH. 40 PERFORATED UNDERDRAIN (42 L.F.) 6" PVC, 5CH. 40 PERFORATED UNDERDRAIN — (97 L.F.) 6" PVC, SCH. 40 PERFORATED UNDERDRAIN (77 L.F.) 100 100 -6" PVC, 5CH. 40 PERFORATED UNDERDRAIN (02 L.F.) ESD #2 E5D #3 ESD #1 ESD #4 97 97 94 16+00 15+00 13+00 14+00

> BIO-RETENTION (M-6) IN MEDIAN SECTION ALONG SAINT MARGARETS BOULEVARD

> > Owner Kellogg-CCP, LLC Preston · Scheffenacker Properties c/o David P. Scheffenacker, Jr., 2330 West Joppa Road, Suite 190 Managing Member 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 Ph# 410-296-3800

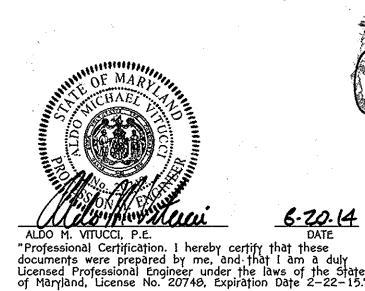
Lutherville, Maryland 21093-4614

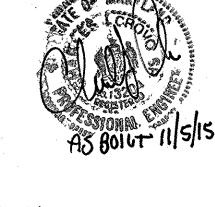
ESDVOI. PROVIDED PER LINEAR FOOT

SURFACE STORAGE = 6.675 SQ.FT./LF.
SAND LAYER = 4.60 SQ.FT./LF.
STONE RESERVIOR (Including Rev) = 11.50 SQ.FT./LF.
TOTAL = 22.70 SQ.FT./LF.

-NOSE DOWN CURB PAVEMENT SLOPE - STD. 7 CONC. CURB & GUTTER (R-3:01) CURB SECTION -nose down curb Alteria W/MIN. OF 4" DEEP FOR EROSION SECTION A-A PROTECTION, PLACE ATOP FILTER W/MIN. OF 4" DEEP FOR EROSION PROTECTION, PLACE ATOP FILTER FABRIC

> SECTION THRU MEDIAN STANDARD CURB OPENING DETAIL FOR CONCRETE CURB ALONG SAINT MARGARETS BOULEVARD NO SCALE





STORMWATER MANAGEMENT NOTES & DETAILS

Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

Tax Map: 30, Parcel: 761, Grid: 20
First Election District — Howard County, Maryland Date: June 18, 2014 Sheek3 of 15

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

AG-BUILT

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous

and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

> Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.

> Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance). > Plants known to send down deep taproots should be avoided in systems where filter fabric is

used as part of facility design.

> Test soil conditions to determine if soil amendments are necessary. > Plants shall be located so that access is possible for structure maintenance > Stabilize heavy flow areas with erosion control mats or sod. > Temporarily divert flows from seeded areas until vegetation is established. > See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume [Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 19931. Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are

Table A.3 Planting Soil Characteristics	5
Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphäte – P2O5)	75 lbs. per acre. minimum
Potassium (potash -1(K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
5ilt	30 to 55 %
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a

Planting Guidance
Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects,

disease, drought, temperature, wind, and exposure. are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge

is the highest elevation and generally supports plants adapted to dryer conditions. For appropriate plant materials for biorefention facilities, Refer To MAA Approved Species List. The layout of plant material should be flexible, but should follow the general principals described in Table A.S. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

Operation And Maintenance Schedule For Commercial Association Owned & Maintained Bio-Retention Areas (M-6)

1. The owner shall maintain the plant material, mulch layer and soil layer annually. maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.

2. The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material. Treat diseased trees and shrubs and replace all deficient stakes and wires.

3. The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three

years. The previous mulch layer shall be removed before the new layer is applied. 4. The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

5. The owner shall maintain all observation wells, clean-outs and perforated underdrains. 6. Filter material must be replaced when water remains on the surface of the filter bed for more

than 24 hours following a 1 or 2 year storm event or more than 48 hours following a 10 year storm

B.4.C Specifications for Micro-Bioretention. Rain Gardens, Landscape Infiltration & Infiltration Berms

The allowable materials to be used in these practices are detailed in Table 8.4.1.

2. Filtering Media or Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretention practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.00.01.05.

The planting soil shall be tested and shall meet the following criteria:

Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)

Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam

Clay Content - Media shall have a clay content of less than 5%.

pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

Recommended plant material for micro-bioretention practices can be found in Appendix A.

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch Grass and legume plugs shall be planted following the non-grass ground cover planting

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains should meet the following criteria:

5. Plant Installation

Pine- Should be 4" to 6" diameter, stotted or perforated rigid plastic pipe (ASTMF 750, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).

Perforations - If perforated pipe is used, perforations should be $3/8^{\circ}$ diameter located 6° center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or 4x4) galvanized hardware cloth.

Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3"thick above and below the underdrain.

The main collector pipe shall be at a minimum 0.5% slope.

A rigid, non-perforated observation well must be provided (one per every 1,0000 square feet) to provide a clean-out port and monitor performance of the filter.

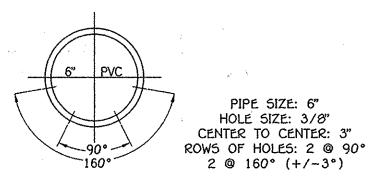
A 4" layer of pea gravel (1/8" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area). 7. Miscellaneous

These practices may not be constructed until all contributing drainage area has been

STORMWATER MANAGEMENT MAINTENANCE NOTE

ALL STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURE WITHIN THE MICRO BIO-RETENTION FACILITIES ADJACENT TO THE RIGHT-OF-WAY.



SCH 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE NO 5CALE

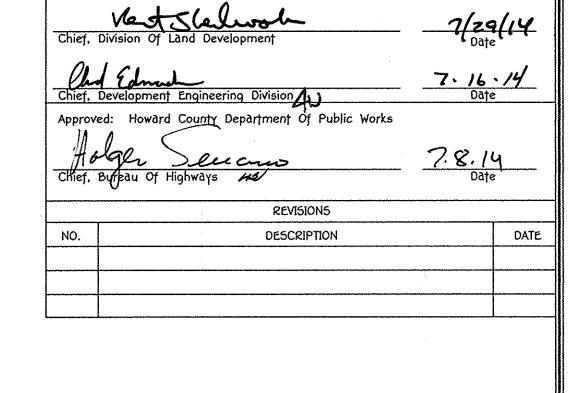
UNDERDRAIN PIPE SHALL BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 750, TYPE P5 28 OR AASHTO-M- 278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g., PVC OR HDPE).

PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE / SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

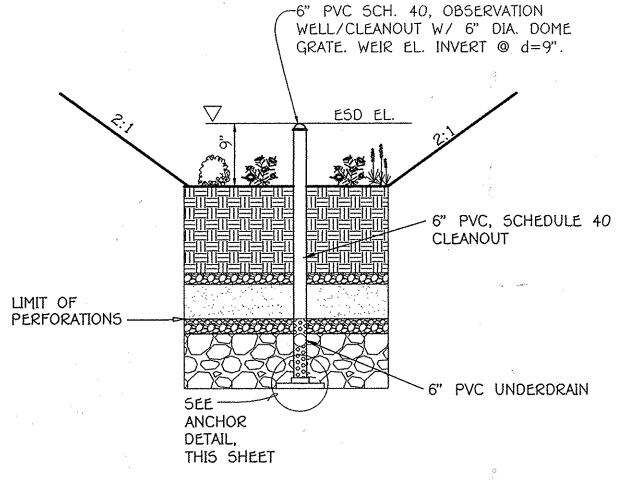
GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN. THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5%

A RIGID, NON PERFORATED OBERSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE

A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF

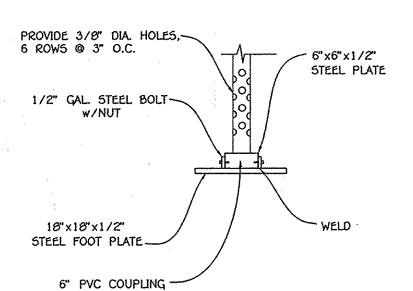


Approved: Department Of Planning And Zoning



SECTION @ OBSERVATION WELL LOCATION

NOT TO SCALE



ANCHOR DETAIL

"Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20740. Expiration Date 2-22-15.

STORMWATER MANAGEMENT NOTES & DETAILS OXFORD SQUARE

"A HOWARD COUNTY GREEN NEIGHBORHOOD Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

> Zoned: TOD Tax Map: 30, Parcel: 761, Grid: 20 First Election District - Howard County, Maryland Date: June 18, 2014

Kelloga-CCP. LLC c/o David P. Scheffenacker, Jr., Managing Member 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614

Ph# 410-296-3800

Owner

6" dia. DOME GRATE-

HOPE OR

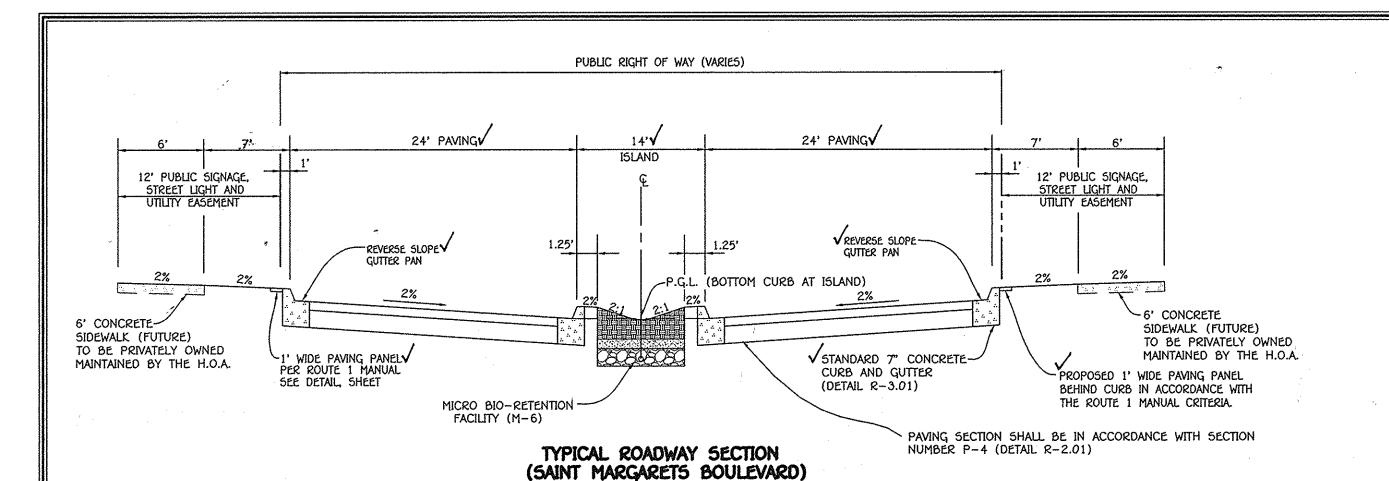
- PROVIDE 6" PVC 5CHEDULE 40

PVC PIPE

Typical clean—out detail

Preston · Scheffenacker Properties 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 Ph# 410-296-3800

Developer

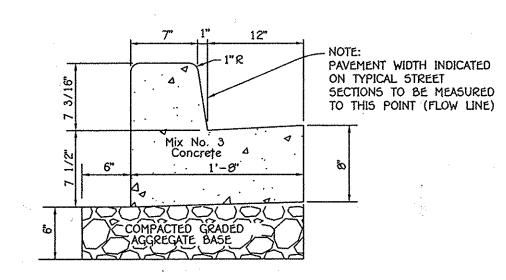


NO SCALE

SECTION ROAD AND STREET		CALIFORNIA BEARING RATIO (CBR) 3		5 TO <7	≥7	3 TO <5	5 TO <7	≥7
NUMBER	CLASSIFICATION	PAVEMENT MATERIAL (INCHES)	MIN I	IMA WITH	GAB	HMA W	ITH CONSTA	NT GAB
	MINOR COLLECTORS: NON-RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE 12.5 MM, PG 64-22, LEVEL 2 (LOW ESAL)	2.0	2.0	2.0	2.0	2.0	2.0
P-4	MAJOR COLLECTORS:	HMA SUPERPAVE INTERMEDIATE SURFACE 12.5 MM. PG 64-22; LEVEL 2 (LOW ESAL)	2.0	2.0	2.0	2.0	2.0	2.0
		HMA SUPERPAVE BASE 19.0 MM. PG 64-22, LEVEL 2 (LOW ESAL)	4.0	4.0	3.0	6.0	5.0	3.0
		* GRADED AGGREGATE BASE (GAB)	13.0	7.0	4.0	6.0	6.0	6.0

*GAB NOTE: IN ACCORDANCE WITH THIS PROJECTS GREEN NEIGHBORHOOD SITE PROGRAM, THE GRADED AGGREGATE BASE CAN INCLUDE RECYCLED CONCRETE STONE (RC) THAT MEETS HOWARD COUNTY

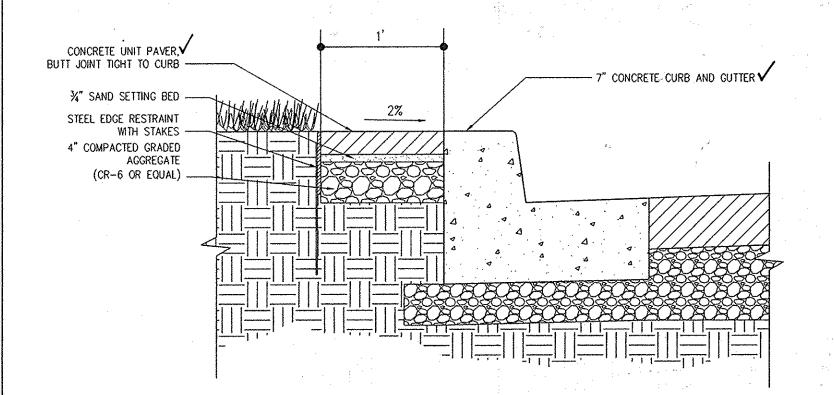
CHIEF, BUREAU OF HIGHWAYS 150 APPROVED: DEPARTMENT OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT Child Chief, Development Engineering Division **REVISIONS** DATE DESCRIPTION



STD. 7" CONC. CURB AND GUTTER

SIDEWALK NOTE:

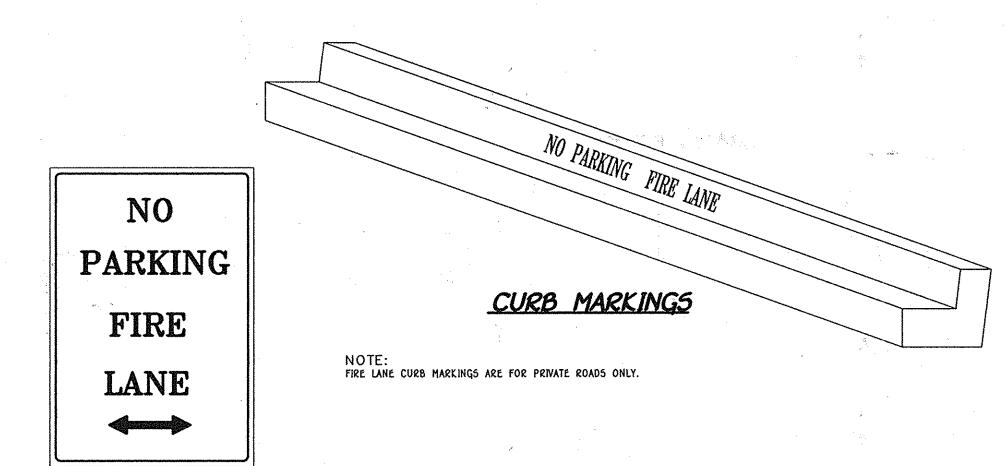
FUTURE CONCRETE SIDEWALKS TO BE PRIVATELY OWNED & MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. AS RESIDENTIAL AND COMMERCIAL LOTS/PARCELS ARE DEVELOPED, PERIMETER SIDEWALKS ON EACH LOT/PARCEL SHALL BE CONSTRUCTED WITH EACH FUTURE SITE DEVELOPMENT PLAN EXCEPT FOR THE PROPOSED SIDEWALK ON OPEN SPACE LOT 2. ADDITIONALLY, SIDEWALKS FROM RESIDENTIAL LOTS/PARCELS SHALL BE CONTINUED ON AND OVER ADJACENT RESIDENTIAL LOTS/PARCELS TO PROVIDE A CONTINUOUS WALKWAY FROM THE SUBJECT LOT/PARCEL UNDER DEVELOPMENT TO THE PUBLIC SCHOOL SITE.



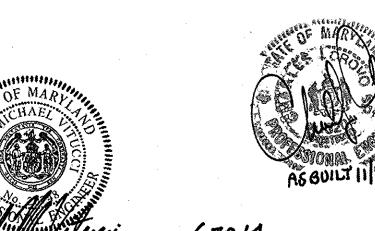
1' PAVER STRIP AT SAINT MARGARETS BOULEVARD

(IN ACCORDANCE WITH THE ROUTE 1 DESIGN MANUAL CRITERIA)

Preston • Scheffenacker Properties 2330 West Joppa Road, Suite 190 c/o David P. Scheffenacker, Jr., Managing Member Lutherville, Maryland 21093-4614 Ph# 410-296-3800 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 Ph# 410-296-3800



NO PARKING FIRE LANE SIGN



ROADWAY DETAILS "A HOWARD COUNTY GREEN NEIGHBORHOOD"

Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

Zoned: TOD

Tax Map: 30, Parcel: 761, Grid: 20

First Election District - Howard County, Maryland

Date: June 10, 2014

Sheet 5 of 15

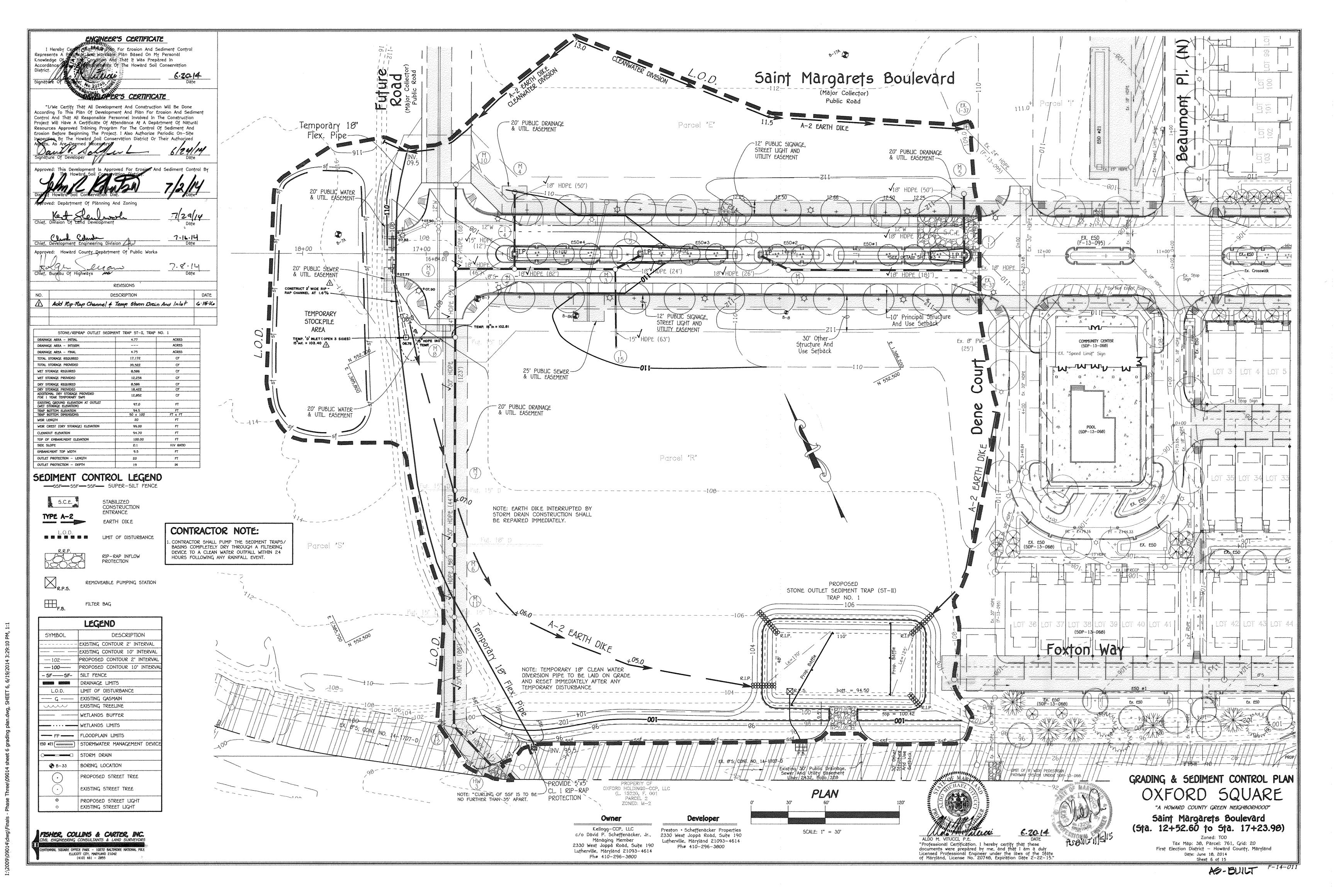
FISHER, COLLINS & CARTER, INC.

SAINT MARGARETS BLVD. S.W.M. NOTE: MICRO BIO-RETENTION FACILITIES AND STORM DRAIN PIPE TO MANHOLE AT MEDIANS SHALL BE PRIVATELY OWNED AND

MAINTAINED BY THE OXFORD SQUARE COMMERCIAL

ASSOCIATION, INC.

AS-BUILT



A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

Soil of between 6.0 and 7.0.

ii. Soluble salts less than 500 parts per million (ppm). iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus

clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.

iv. Soil contains 1.5 percent minimum organic matter by weight. v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions. c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria.

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. 6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets

c. Topsoil must not be placed if the topsoil or subsoil is in a trozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #20 mesh sieve.

4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.

5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

TEMPORARY SEEDING NOTES (8-4-4)

To stabilize disturbed soils with vegetation for up to 6 months

To use fast growing vegetation that provides cover on disturbed soils

Conditions Where Practice Applies Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

1. Select one or more of the species or seed mixtures listed in Table 8.1 for the appropriate Plant Hardiness Zone (from Figure 8.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table 8.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section 8-4-3.A.1.b and maintain until the next seeding season.

		Temporary Seedin	g Summary		
tardiness Zo Seed Mixture	ne (from Figure B. (from Table B.1):	3): <u>6b</u>		Fertilizer Rate (10-20-20)	Lime Rate
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac	2 tons/ac
OATS	72	3/1 - 5/15. 8/15 - 10/15	1"	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)
RYE	112	3/1 - 5/15,	1"		

PERMANENT SEEDING NOTES (B-4-5) A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table 8.3 for the appropriate Plant Hardiness Zone (from Figure 8.3) and based on the site condition or purpose found on Table 8.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or desthetic treatment may be found in USDA-NRCS Technical Field Office

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet.

Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3

Select turfordss varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turforass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best quarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future moving of grasses will pose no

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse

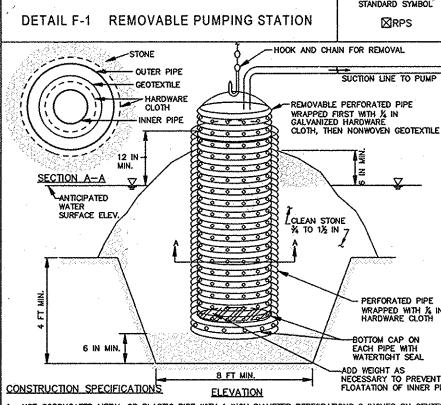
Permanent Seeding Summary

		e (from Figure B. (from Table B.3):			Ferțiliz	er Rațe (10-	20-20)	Lime Rațe
No.	Species	Application Rate (lb/ac)	Seeding Dațes	Seeding Depths	N	P ₂ O ₅	K ₂ 0	*
8	TALL' FESCUE	100	Mar. 1-May 15 Aug. 1-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 b/ac (2 b/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 st)

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.



USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER . USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.

WRAP EACH PIPE WITH ½ INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH. EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.

. SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN). BACKFILL PIT AROUND THE OUTER PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.

DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

Developer Preston • Scheffenacker Properties

8-4-3 STANDARDS AND SPECIFICATIONS SEEDING AND MULCHING

Definition The application of seed and mulch to establish vegetative cover.

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies To the surface of all perimeter controls, slopes, and any disturbed area not under active grading

a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector

to verify type of seed and seeding rate.

Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keetp inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.

d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

a. Dry Seeding: This includes use of conventional drop or broadcast spreaders. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3. or site-specific seeding summaries. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in

each direction. Roll the seeded area with weighted roller to provide good seed to soil b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. Cultipacking seeders are required to bury the seed in such a fashion as to provide at

least 1/4 inch of soil covering. Seedbed must be firm after planting. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).

i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P20s (phosphorus).

200 pounds per acre; K_2O (potassium), 200 pounds per acre. ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

Mix seed and fertilizer on site and seed immediately and without interruption When hydroseeding do not incorporate seed into the soil.

Mulch Materials (in order of preference)

B. Mulching

Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.

Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.

WCFM, including dye, must contain no germination or growth inhibiting factors. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter—like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

iv. WCFM material must not contain elements or compounds at concentration levels that will by WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

Apply mulch to all seeded areas immediately after seeding.

When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.

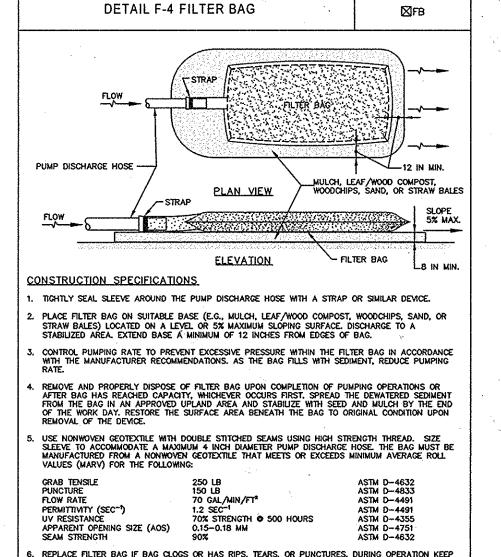
Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

Perform mulch anchoring immediately following application of mulch to minimize loss by wind a water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard: A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used or sloping land, this practice should follow the contour.

Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water. iii. Synthetic binders such as Acrylic DLR (Agro-Tock), DCA-70, Petroset, Terra Tax II, Terra ack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind

catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is

strictly prohibited. iv. Lightweight plastic netting may be stapled over the mulch according to manufactures recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000



STANDARD SYMBOL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL WARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

Kellogg-CCP, LLC c/o David P. Scheffenacker, Jr., 2330 West Joppa Road, Suite 190 Managing Member Lutherville, Maryland 21093-4614 2330 West Joppa Road, Suite 190 Ph# 410-296-3000 Lutherville, Maryland 21093-4614

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMITS. (2 WEEKS) 2. NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-000-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DMSION AT 410-313-1870 AT LEAST 24 HOURS BEFORE STARTING ANY WORK. IN ADDITION, NOTIFY AT&T PRIOR TO ANY ACTIVITY WITHIN

3. Install stabilized construction entrance, super-silt fence where shown on the plans. Clear and grub where necessary. (1 week)

4. Install clean water diversion dikes and flexible pipe. Following this task, install 5,0.5.t. No. 1 AND REMAINING PERIMETER SEDIMENT CONTROL MEASURES AS SHOWN INCLUDING THE TWO ADDITIONAL EARTH DIKES TO S.O.S.T. No. 1. (1 WEEK)

5. STABILIZE ALL DISTURBED AREAS WITH TEMPORARY SEEDING, CONTACT THE COUNTY SEDIMENT EROSION INTROL INSPECTOR BEFORE PROCEEDING. (2 DAYS)

6. GRADE SITE TO MASS GRADING CONTOURS AND GRADE ROADWAYS TO SUB BASE. (4 WEEKS)

7. INSTALL PROPOSED STORM DRAIN INCLUDING CONNECTIONS TO EACH OF THE SWM FACILITIES, WATER LINE AND SEWER LINE CONSTRUCTION FOR SAINT MARGARETS LANE. (4 WEEKS) 0. ONCE STORM DRAINS ARE INSTALLED, PLACE INLET PROTECTION (TYPE 'A') AT THE INLETS IN SAINT MARGARETS LANE. THE CONSTRUCTION OF THE FILTER MEDIA, UNDERDRAIN AND PLANTINGS FOR EACH

BIO-RETENTION CELL SHALL BE DELAYED UNTIL THE CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED. PLACE ROADWAY SUB-BASE WITHIN SAINT MARGARETS LANE. PAVE SAINT MARGARETS LANE AND ASSOCIATED UP TO THE INTERMEDIATE SURFACE LAYER WITHIN THE P-4 PAVING SECTION. SEE R-2.01 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV. (5 DAYS) NOTE: FUTURE SITE PLANS WILL PROTECT BIO-RETENTION FACILITIES WITH SILT FENCE AS WELL

9. INSTALL BASE COURSE OF PAVING FOR SAINT MARGARETS LANE. (1 WEEK) 10. Install the proposed SWM devices within the median of Saint Margarets lane. Once this area is stabilized, remove the inlet protection located around the inlets. (4 days) 11. NOTE: REMOVAL OF THE PERIMETER SEDIMENT CONTROL FEATURES AND BASINS SHALL BE COORDINATED WITH FUTURE SITE PLANS BEFORE THE FINAL SWM CONVERSIONS TAKE PLACE AS SHOWN

I.Z. PROVIDE PERMANENT SEEDING TO ANY DISTURBED AREAS ONSITE AND STABILIZE THE ENTIRE 13. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR START REMOVING ANY SEDIMENT CONTROL FEATURES NOT REQUIRED TO REMAIN FOR FUTURE SITE PLAN PHASES AND STABILIZE THE

14. NOTE CONTRACTOR SHALL PUMP THE SEDIMENT TRAPS/BASINS COMPLETELY DRY THROUGH A FILTERING DEVICE TO A CLEAN WATER OUTFALL WITHIN 24 HOURS FOLLOWING ANY RAINFALL EVENT 15. IN ACCORDANCE WITH THE GREEN NEIGHBORHOOD CRITERIA, NO FOREST IMPACT IS ANTICIPATED. HOWEVER, THE CONTRACTOR SHALL REPLACE ANY TREES IMPACTED BY THE BREACHING AND WETLAND/STREAM RESTORATION EFFORTS.

16. THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN REGARDS TO THE REQUIREMENT THAT NO MORE THAN 20-ACRES OF "OPEN" GROUND SHALL BE DISTURBED AT ANY GIVEN TIME. THIS MAY BE

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM STONE OUTLET SEDIMENT TRAP #1 WHEN CLEANOUT ELEVATIONS ARE REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF AN APPROVED BASIN DEVICE.

NOTE: CONTRACTOR SHALL CLEAN AND RESTORE THE RECEIVING PONDS OF ANY AND ALL SEDIMENT, TO

note: Per gn credit H=3, all construction waste must be managed in ACCORDANCE WITH THE CONSTRUCTION WASTE MANAGEMENT PLAN.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

A mound or pile of soil protected by appropriately designed erosion and sediment control measures. Purpose To provide a designated location for the temporary storage of soil that controls the potential for erosion,

Conditions Where Practice Applies Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Standard 8-4-1 Incremental Stabilization and Standard 8-4-4 Temporary Stabilization.

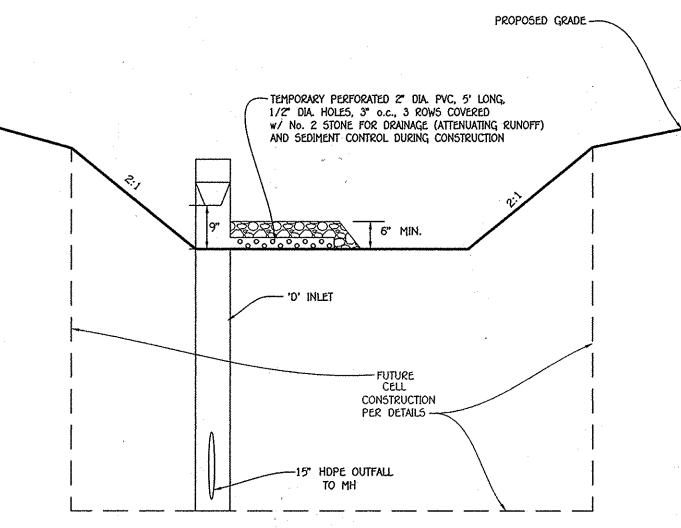
sedimentation, and changes to drainage patterns

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan. 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.

3. Runoff from the stockpile area must drain to a suitable sediment control practice 4. Access the stockpile area from the upgrade side. 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as

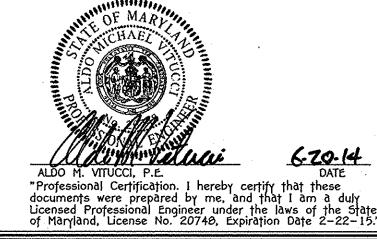
. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1

slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section 8-3



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED

NO SCALE



dge Chicago Carrent of The Howard Soil Conservation Represents A Knowledge Accordance District. DEVELOPER'S CERTIFICATE "I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary." oved: Department Of Planning And Zoning 7/29/14 Chil Educh Chief, Development Engineering Division / Approved: Howard County Department Of Public Works 7.8.14 · lucus Holge Okief, Byreau Of Highways

ENGINEER'S CERTIFICATE

n For Erosion And Sediment Control

REVISIONS

DESCRIPTION

DATE

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).

ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO TH PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO. 3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE. PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER

EDIMENT CONTROL STRUCTURES. DIKES. PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED AROVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 8-4-5). TEMPORARY SEEDING (SEC. 8-4-4) AND MULCHING (SEC. 8-4-3). TEMPORARY STABILIZATION WITH

MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES. 5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN

ORTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR 6) SITE ANALYSIS: TOTAL AREA OF SITE AREA DISTURBED AREA TO BE ROOFED OR PAVED

ACRES 6,070 CU.YD5. (Unadjusted) 4,662 CU.YD5. (Unadjusted) OFFSITE WASTE/BORROW AREA LOCATION N/A 7) ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR

5.02 ACRES

8) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES. APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY

PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. 10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER. 11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED

AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH

12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRE PER GRADING UNIT) AT A TIME, WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PROCEEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

> SEDIMENT AND EROSION CONTROL NOTES & DETAILS

OXFORD SQUARE

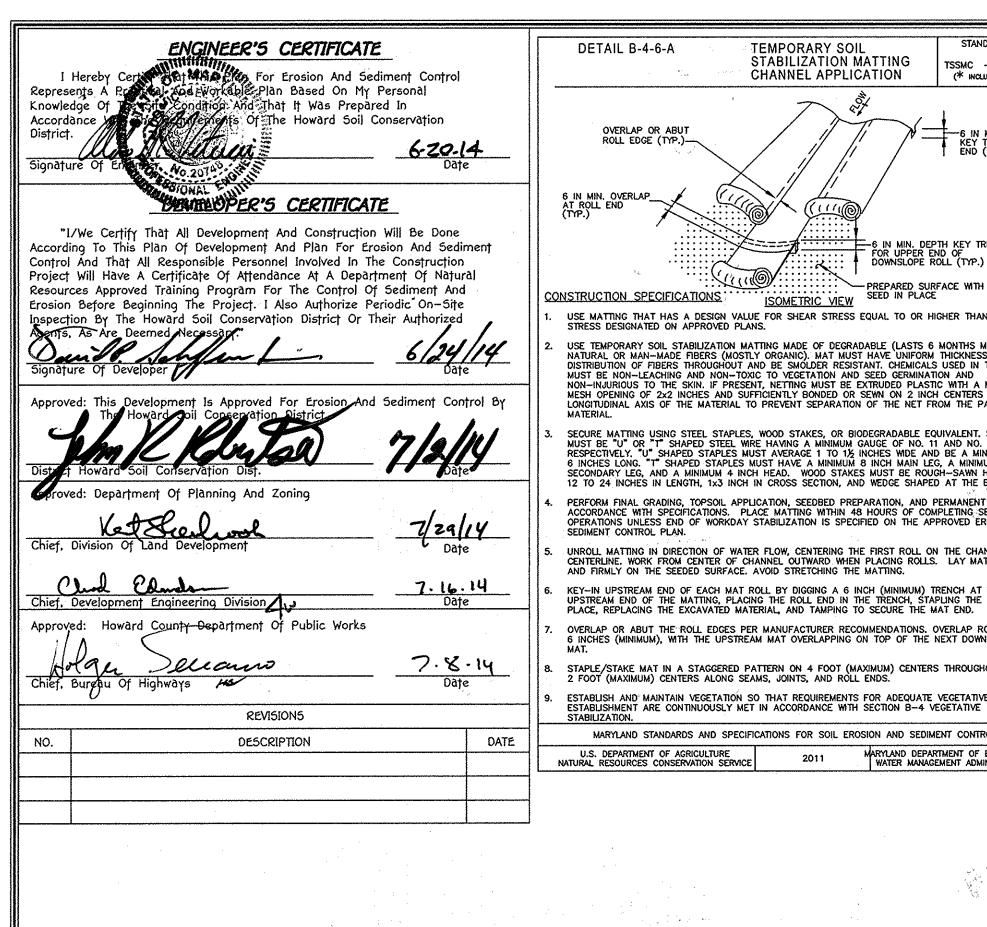
Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

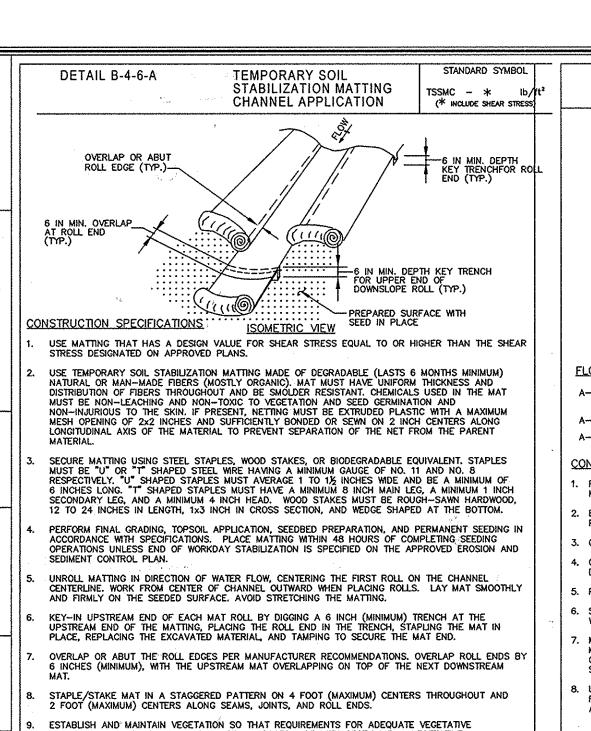
> Zoned: TOD Tax Map: 30, Parcel: 761, Grid: 20 First Election District - Howard County, Maryland Date: June 18, 2014

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYOR ELLICOTT CITY, MARYLAND 21042

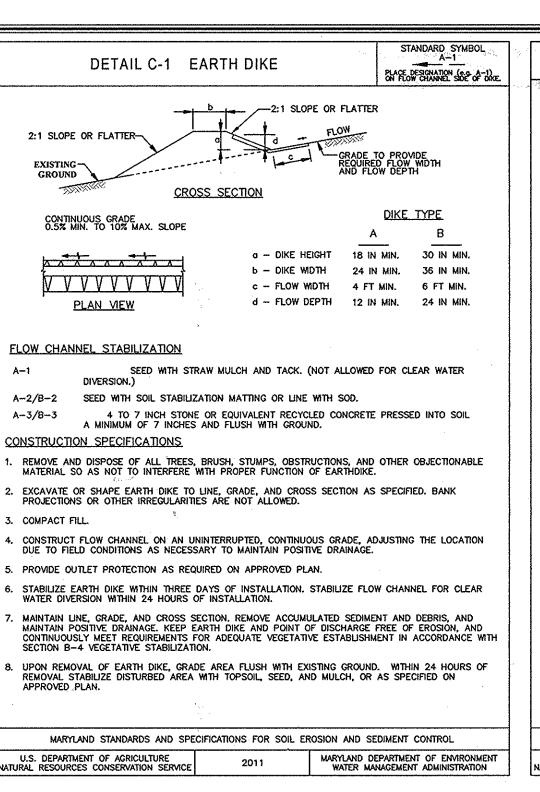
Owner

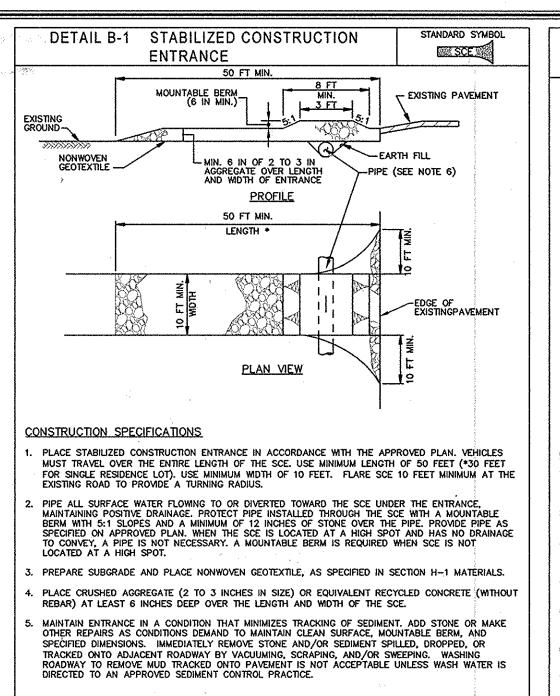
Ph# 410-296-3800





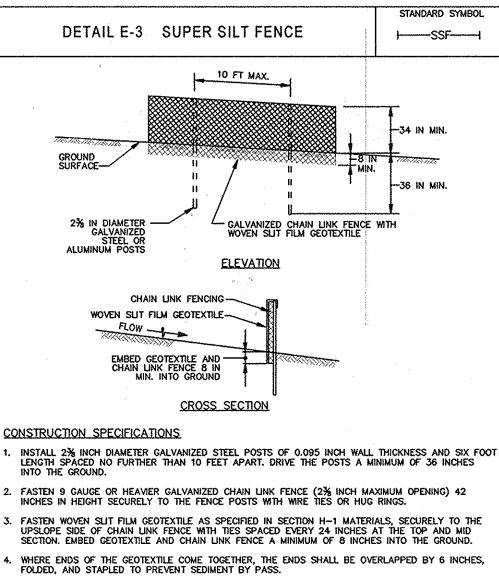
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL





MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

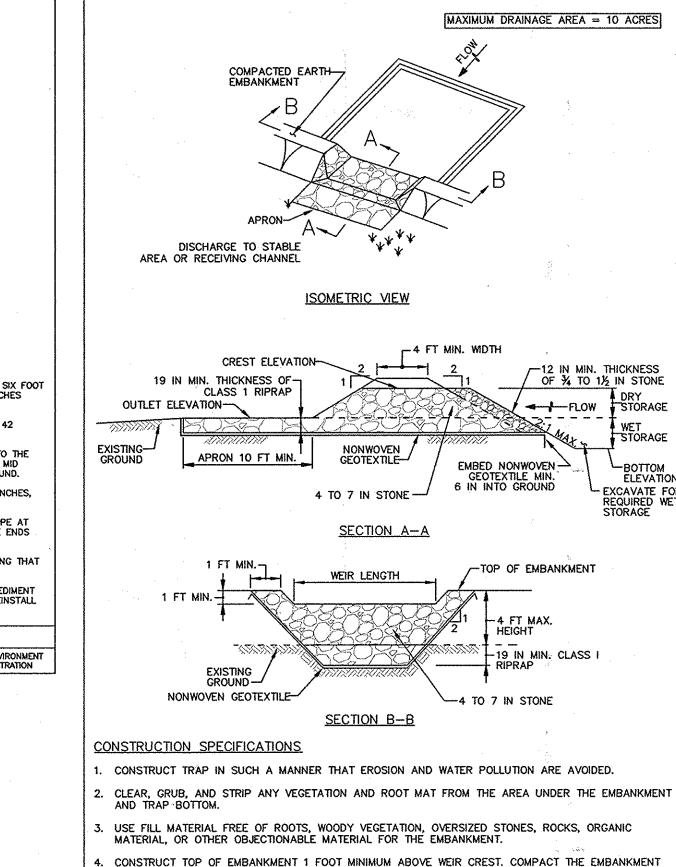
U.S. DEPARTMENT OF AGRICULTURE
URAL RESOURCES CONSERVATION SERVA



. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

CHAIN LINK FENCING AND GEOTEXTILE.



BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.

PLACE NONWOVEN GEOTEXTILE. AS SPECIFIED IN SECTION H-1 MATERIALS. OVER THE BOTTOM AND SIDES OF OUTLIFT AND APRON PRIOR TO PLACEMENT OF RIPRAP, OVERLAP SECTIONS OF GEOTEXTILE

AT LEAST 1 FOOT WITH THE SECTION NEARER TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT

USE CLEAN 4 TO 7 INCH RIPRAP TO CONSTRUCT THE WEIR. USE CLASS I RIPRAP FOR THE APRON.

. MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.

DETAIL G-1-2 STONE/RIPRAP OUTLET

SEDIMENT TRAP ST-II

STANDARD SYMBOL

ST-II

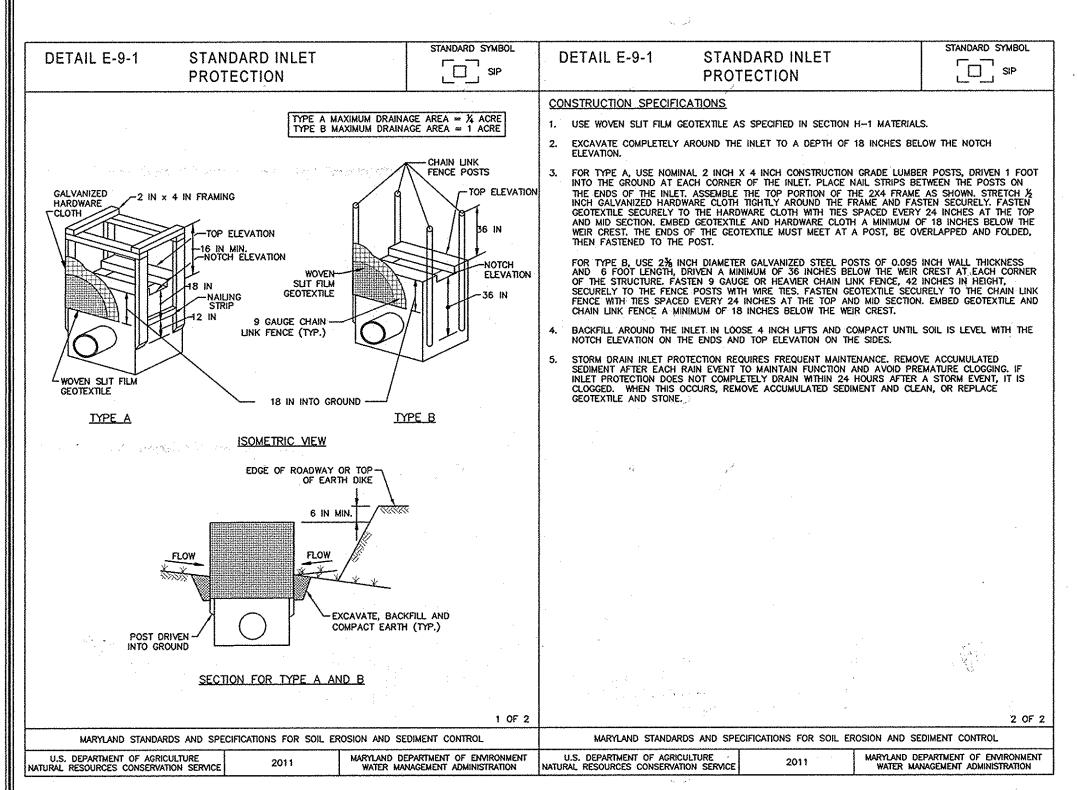
TSTORAGE

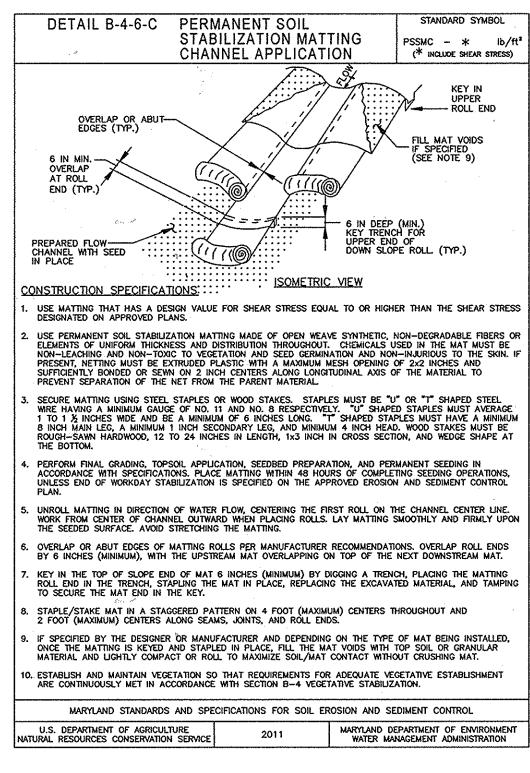
TORAGE

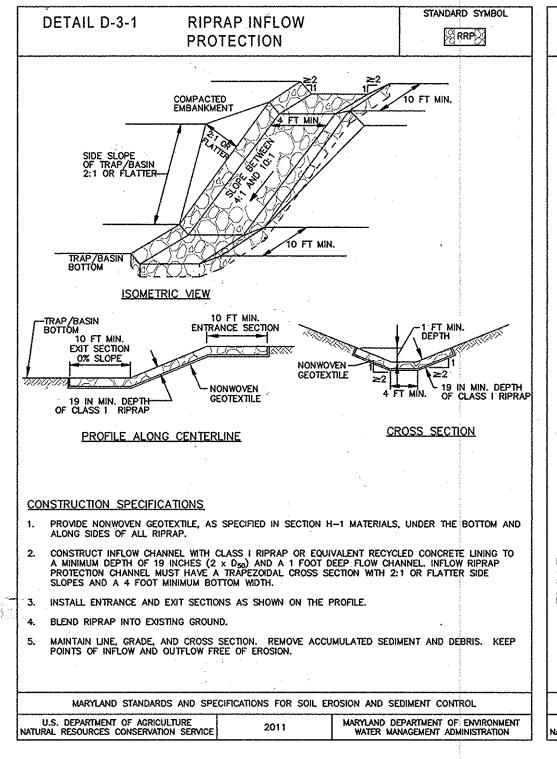
ELEVATION

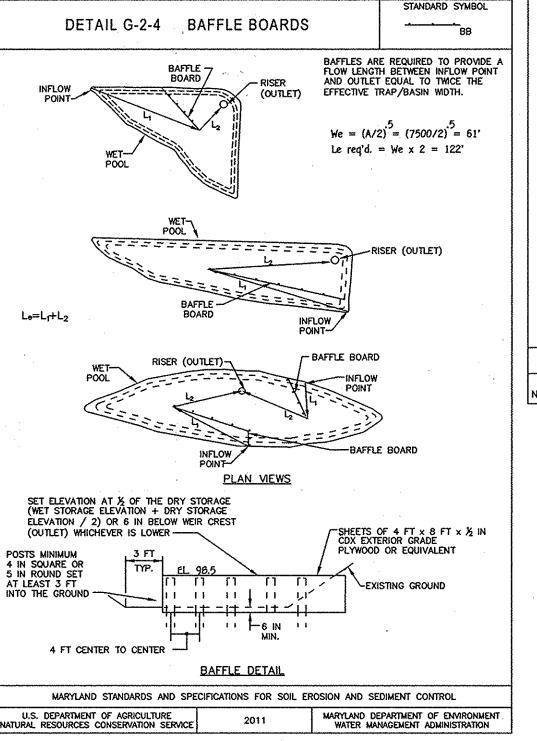
- EXCAVATE FOR

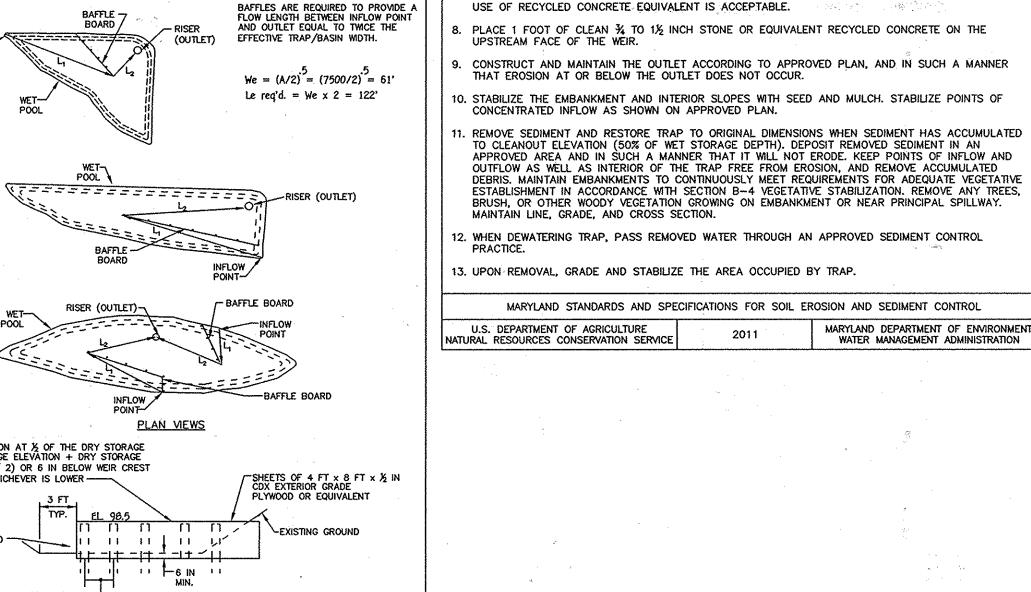
REQUIRED WET STORAGE

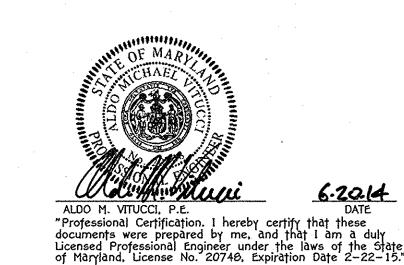












SEDIMENT AND EROSION CONTROL NOTES & DETAILS

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

"A HOWARD COUNTY GREEN NEIGHBORHOOD"

Date: June 10, 2014

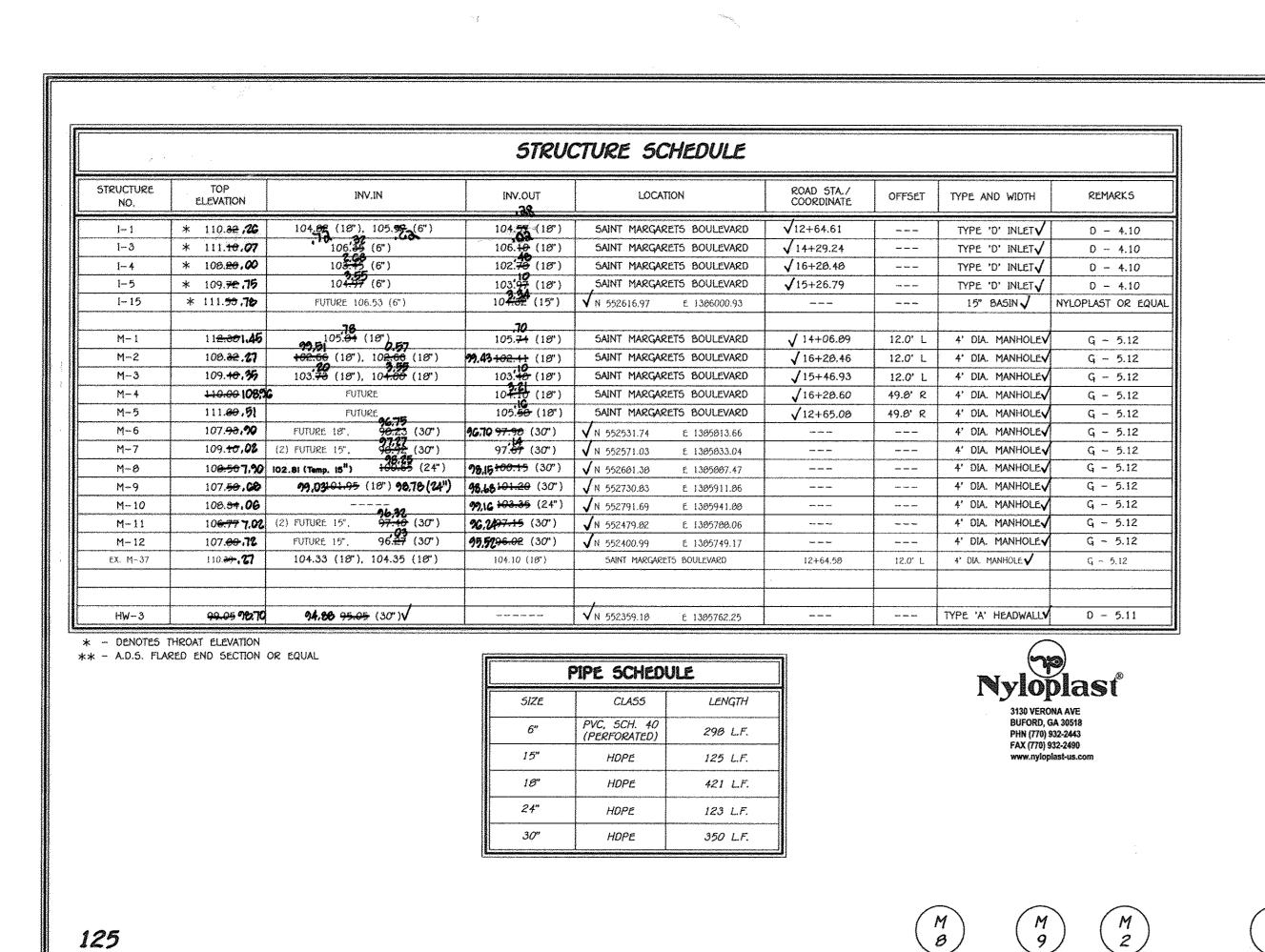
Saint Margarets Boulevard (Sta. 12+52.60 to Sta. 17+23.98) Tax Map: 30, Parcel: 761, Grid: 20

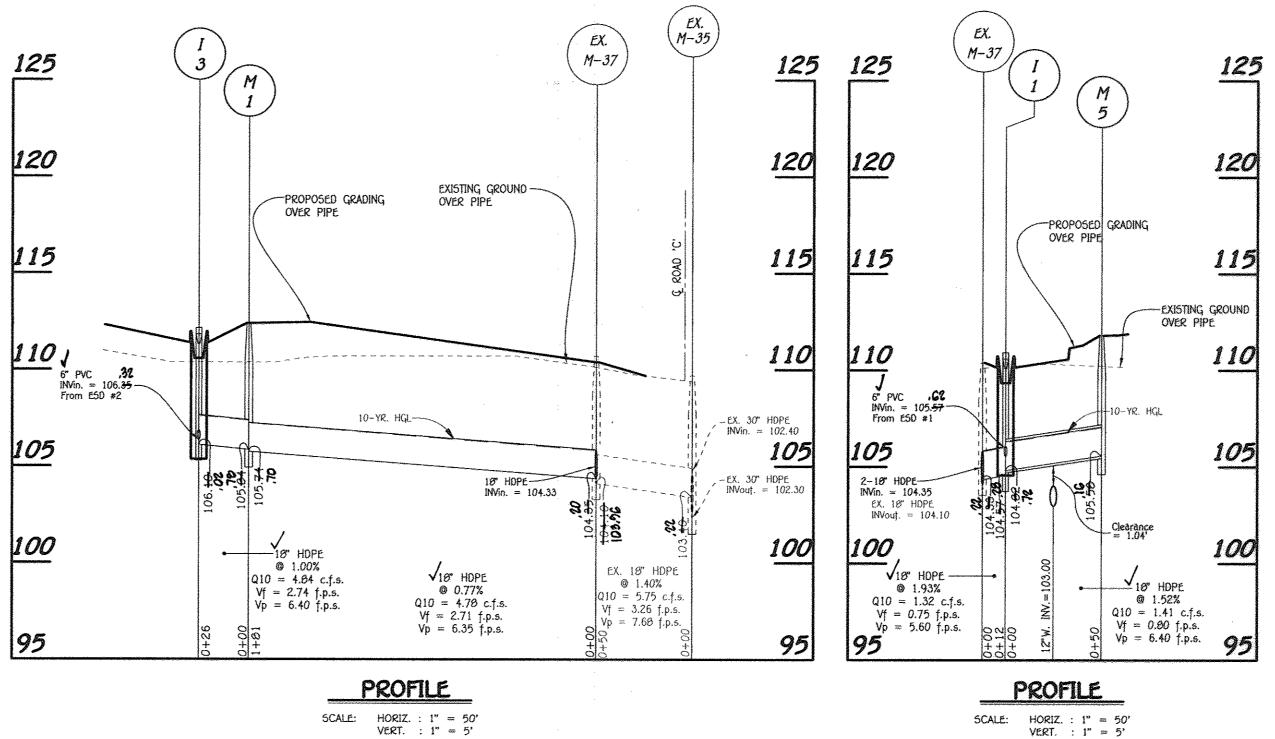
First Election District - Howard County, Maryland

FISHER, COLLINS & CARTER, INC. re-office park — 10272 baltimore national pib (410) 461 - 2855

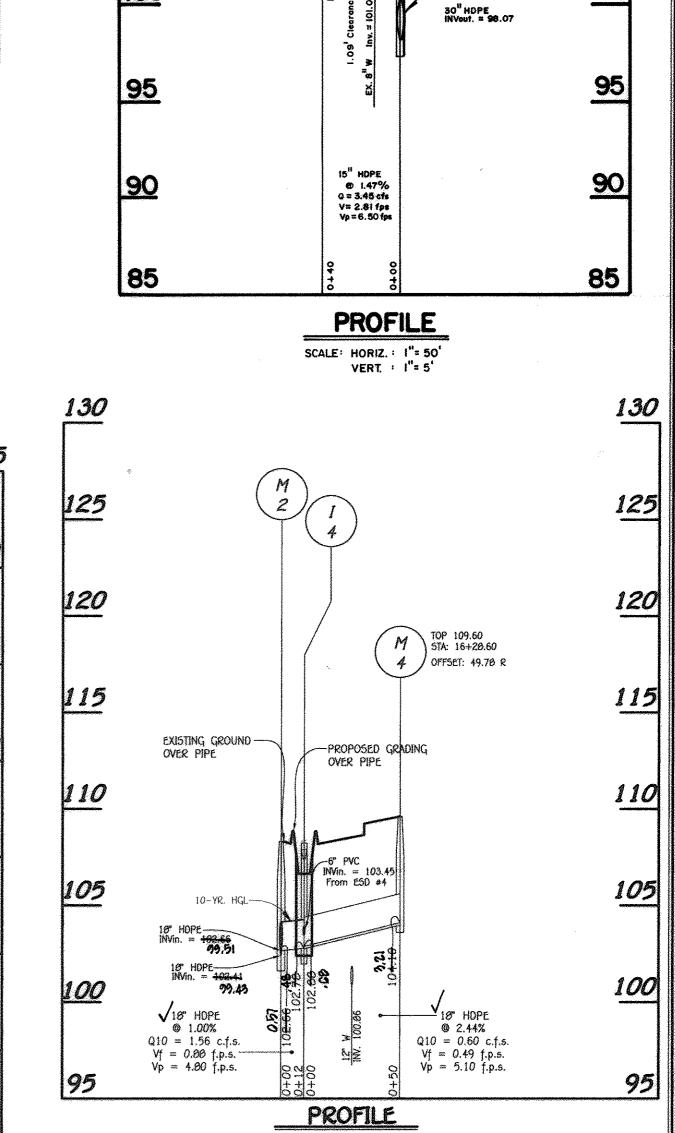
Owner Kellogg-CCP, LLC c/o David P. Scheffenacker, Jr., 2330 West Joppă Road, Suite 190 Lutherville, Maryland 21093-4614 Ph# 410-296-3800

Developer Preston · Scheffenacker Properties 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 Ph# 410-296-3800





130 130



APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION ALL

OVER PIPE

Add Storm Drain Profile For Temp Inlet

REVISIONS

DESCRIPTION

7-29-14

7.29.14

EXISTING GROUND

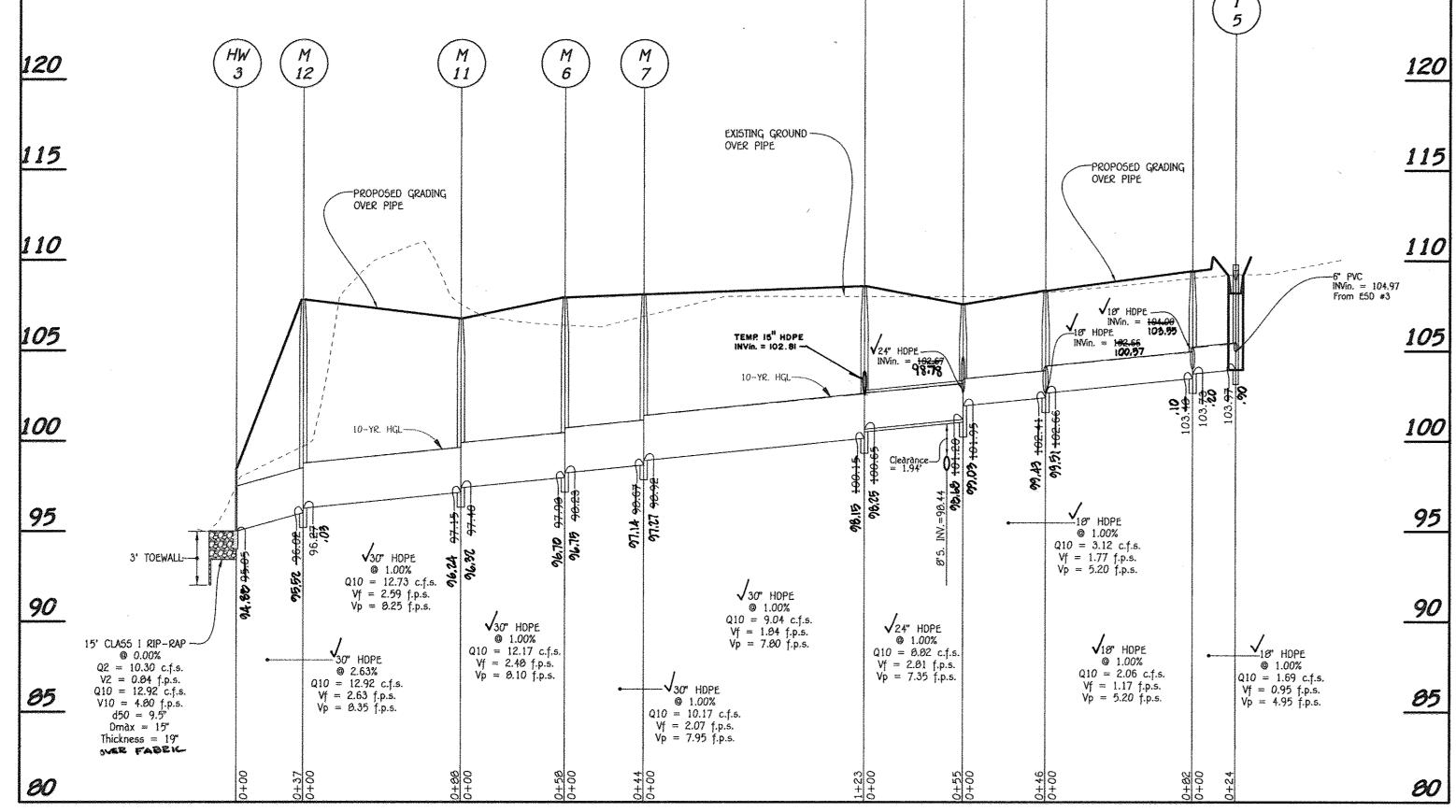
OVER PIPE

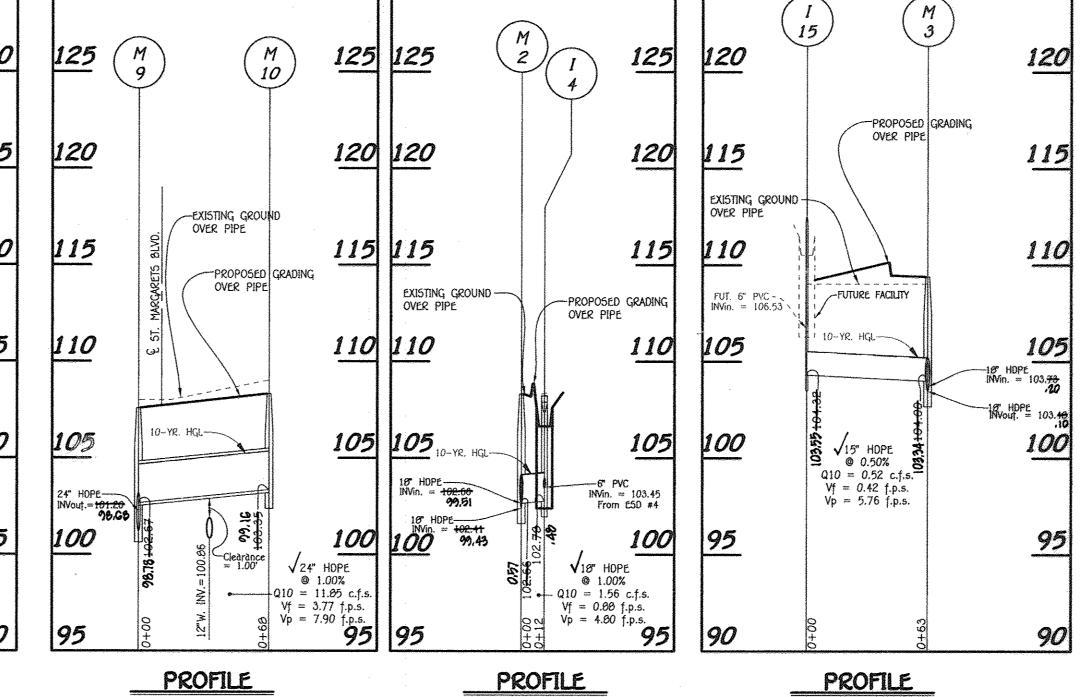
6.15.16

115

105

Holar Deram CHIEF, BUREAU OF HIGHWAYS MS





SCALE: HORIZ. : 1" = 50' VERT. : 1" = 5'

130 125

SCALE: HORIZ : 1" = 50' VERT. : 1" = 5'

STORM DRAIN PROFILES

HORIZ. : 1'' = 50'VERT. : 1'' = 5'

SCALE:

OXFORD SQUARE

"A HOWARD COUNTY GREEN NEIGHBORHOOD" Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

> Zoned: TOD Tax Map: 38, Parcel: 761, Grid: 20 First Election District - Howard County, Maryland Dațe: June 18, 2014 Sheet 9 of 15

FISHER, COLLINS & CARTER, INC. square office park - 10272 Baltimore National Piki

Scale: 1" = 50'

PROFILE

VERT. : 1" = 5"

SCALE: HORIZ. : 1" = 50"

Owner Kellogg-CCP, LLC

Lutherville, Maryland 21093-4614

Ph# 410-296-3800

125

130

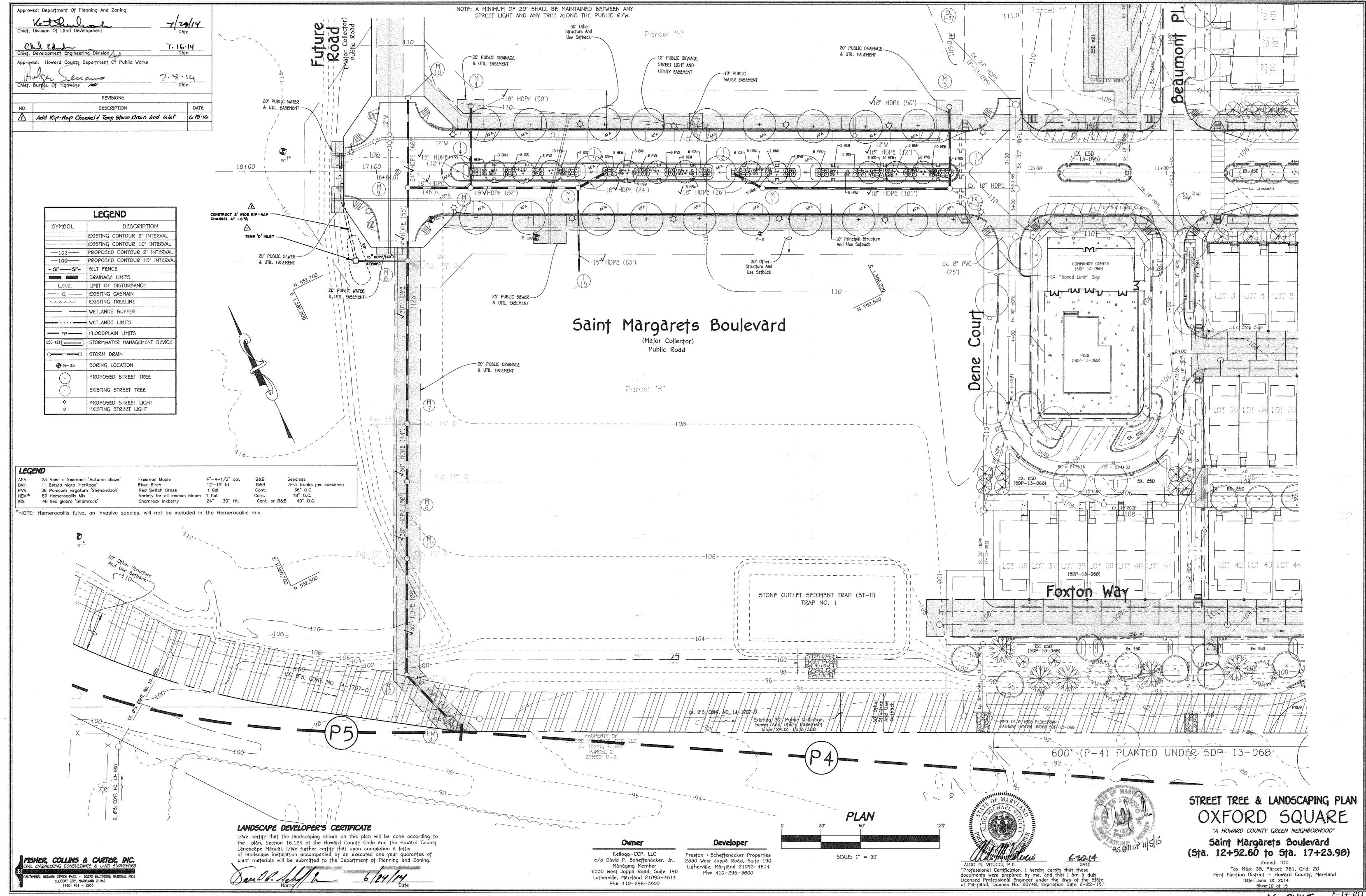
Developer Preston · Scheffenacker Properties c/o David P. Scheffenacker, Jr., 2330 West Joppa Road, Suite 190 Managing Member Lutherville, Maryland 21093-4614 2330 West Joppa Road, Suite 190 Ph# 410-296-3800

5CALE: HORIZ. : 1" = 50"VERT. : 1" = 5"

"Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-15."

A6-BUILT

(410) 461 - 2855



are planted and/or revisions are made to the road drawing plans.

NOTES:

given, die prior to release of bonds, the owner will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 3 inches in caliper and installed as required in the Howard County landscape manual.

At the time of plant installation, all trees listed and approved on the landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no subtitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviations from the approved Landscape Plan

may result in denial or delay in the release of landscape surety until such time as all required materials

Should any tree designated for preservation for which landscaping credit is

The Owner, tenants and/or their agents shall be responsible for maintenace of the required perimeter landscaping. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

PLANTING SPECIFICATIONS

Plants, related material, and operations shall neet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size; root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug, no healed-in plants from cold storage will be accepted. Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to 'Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas', (hereinafter 'Landscape Guidelines') approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and 'Miss Utility' a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at

the drip line.

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on departures and specifications.

drawings and specifications
Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plant take precedence
All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.
Positive drainage shall be maintained in planting beds 2 percent slope).

Planting mix shall be as follows: Beciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

NOTE: CONTRACTOR TO REGRADE, 500 OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF THEIR WORK. SPRAY WITH WILT-PROOF ACCORDING TO MANUFACTURERS STANDARDS
PRUNE 1/3 LEAF AREA BUT RETAIN NATURAL FORM OF TREE
2 PIECES OF REINFORCED RUBBER HOSE DOUBLE #12 GALVANIZED WIRE GUYS TWISTED
3-2"X 2" OAK STAKES, WIRE
WRAP TRUNK TO SECOND TIER OF BRANCHES WITH WATERPROOF TREE WRAP, TIE AT 24" INTERVALS (EXCEPT EVERGREENS) REMOVE ANY COVERING FROM TOP OF ROOT CROWN
3" MULCH
MAINTAIN GROUND LINE WITH TOP OF ROOT CROWN
CONSTRUCT 3" SAUCER RIM-FLOOD WITH WATER TWICE WITHIN 24 HOURS
TOP SOIL MIXTURE
CONVEX BOTTOM 6" MIN. HT.

SHADE	TREE	PLANT	ING	DET	VIL.
		NO SCALE			

PLANT MATERIAL-BIO-RETENTION ESD No. 1					
QUANTITY	NAME	MAXIMUM SPACING (FT.)			
25	MIXED PERENNIALS	18"−36" o.c.			
30	5HRUB5	40° o.c.			

PLANT MAT	erial-bio-ri	etention esd no. 2
QUANTITY	NAME	MAXIMUM SPACING (FT.)
10	MIXED PERENNIALS	18"-36" o.c.
12	5HRUB5	40° o.c.

PLANT MAT	TERIAL-BIO-R	ETENTION ESD No. 3
QUANTITY	NAME	MAXIMUM SPACING (FT.)
20	MIXEO PERENNIALS	18″−36″ o.c.
24	5HRUB5	40° o.c.

PLANT MATE	RIAL-BIO-R	RETENTION ESD No. 4
QUANTITY	NAME	MAXIMUM SPACING (FT.)
20	MIXED PERENNIALS	18″−36″ o.c.
24	5HRU85	40° o.c.

NOTES:
Plant Material Must Cover
At Least 50% Of The Surface
Area Of The Bio-retention

See Plant Material Charts For Quantities And Spacing

CONSTRUCT 3' SAUCER RIM-FLOOD WITH WATER TWICE WITHIN 24 HOURS
GROUND LINE SAME AS IN NURSERY
3' MULCH
PSOIL MIXTURE

SHRUB PLANTING DETAIL

FISHER, COLLINS & CARTER, INC.
CML ENGINEERING CONSULTANTS & LAND SURVEYORS

ouare office park – 10272 Baltimore national pike Ellicott city, maryland 21042 (410) 451 – 2855

V	

LANDSCAPE DEVELOPER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Saule Name | Date

Develo

Kellogg-CCP, LLC
c/o David P. Scheffenacker, Jr.,
Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph# 410-296-3800

Owner

		5CHE	DULE A PERIM	ETER LANDSCAPE	EDGE (PER F-12-	· <i>0</i> 26)		
PERIMETER	P1	P2	Р3	P4	P5	P6	P7	Pø
CATEGORY	Front to Roadway (residential)	Adjacent to Roadway (non-residential)	Non-Res. Adjacent to Non-Res.					
LANDSCAPE TYPE	N/A	В	С	С	С	C	C ,	С
LINEAR FEET OF PERIMETER	376.08'	506.98'	470.63'	1100.54'	931.99'	1630.70'	1588.13'	2042.92'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	1	NO	NO	NO	NO	Y£5~350'	100% CREDIT	YE5-225'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	-	NO	NO	NO	NO	NO	, NO	МО
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	0 0 -	10 13	12 24	30 60 	23 47 -	32 64 	0 0 -	46 91
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	0 0 - 	- - - - - -		- - - -		- - - - -	0 0 - -	

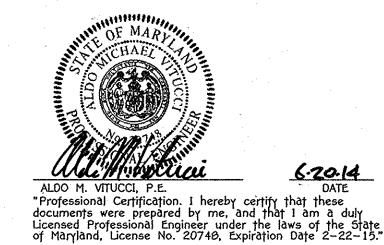
Note: Schedule 'a' landscaping shall be deferred until site plan stage.

STREET TREE SCHEDULE							
QTY. REQUIRED	BOTANICAL AND COMMON NAME	SIZE	COMMENTS				
1/40 l.f. = 471'/40 x 2 = 24 †rees	Betulā Nigrā 'heritāge' River Birch Acer x Fremmānii 'Autumn Blāze' Autumn Blāze Freemān Māple (seedless only)	10'-12' Ht. 3 Trunks (min.) 4" -4 ¹ /2" CAL.	ALONG PUBLIC R/W SAINT MARGARETS BLVD. (SEE PLAN)				

MOTE: FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.

	511	reet tree plant list	
5YMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE
BNH +	11	Betula Nigra 'heritage' River Birch	10"-12" HT. 3 Trunks (min.)
AFA +	23	Acer x Fremmanii 'Autumn Blaze' Autumn Blaze Freeman Maple (seedless only)	4" - 4 ¹ /2" CAL

FINANCIAL SURETY FOR THE REQUIRED 24 STREET TREES AND 10 ADDITIONAL TREES PROVIDED TO MEET GN CREDIT E-1 HAS SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$10,200.00

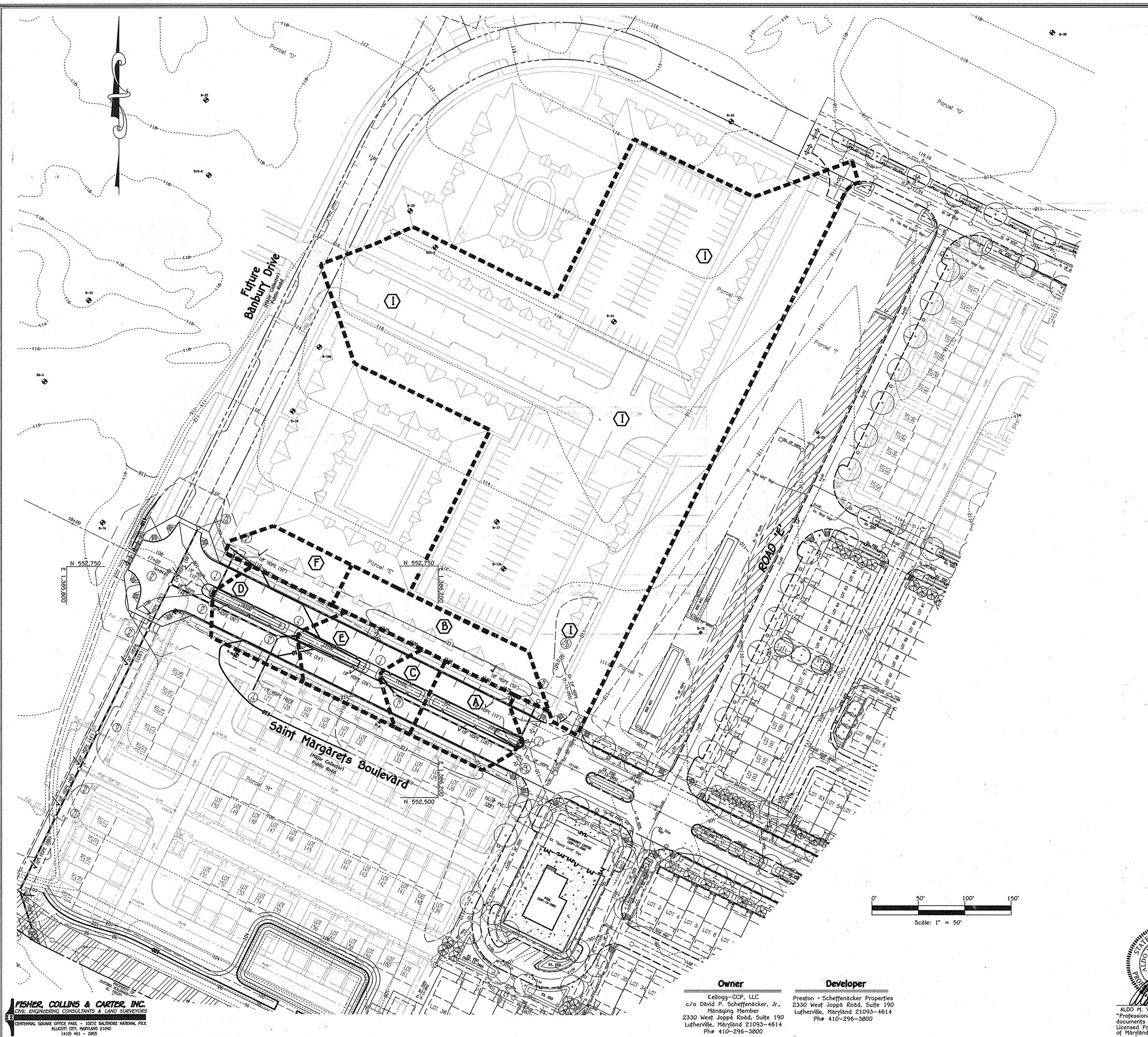


LANDSCAPING NOTES
OXFORD SQUARE

"A HOWARD COUNTY GREEN NEIGHBORHOOD"

Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

Tax Map: 30, Parcel: 761, Grid: 20
First Election District — Howard County, Maryland
Date: June 10, 2014
Sheet 11 of 15



APPROVED: DEPARTMENT OF PLANNING AND ZONING REVISIONS DESCRIPTION

DRAINAGE AREA DATA 0.20 AC. 0.72 68% 84% T.O.D. 76% I-32 0.08 AC. 0.78 3 0.22 AC. 0.74 71% 0.20 AC. 0.72 67% T.O.D. 72% M-485% EX. I-37 2.72 AC. 0.85 T.O.D.



ALDO M. VITUCCI, P.E.

"Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20740, Expiration Date 2-22-15."

STORM DRAIN DRAINAGE AREA MAP

Saint Margarets Boulevard
(5ta. 12+52.60 to 5ta. 17+23.98)

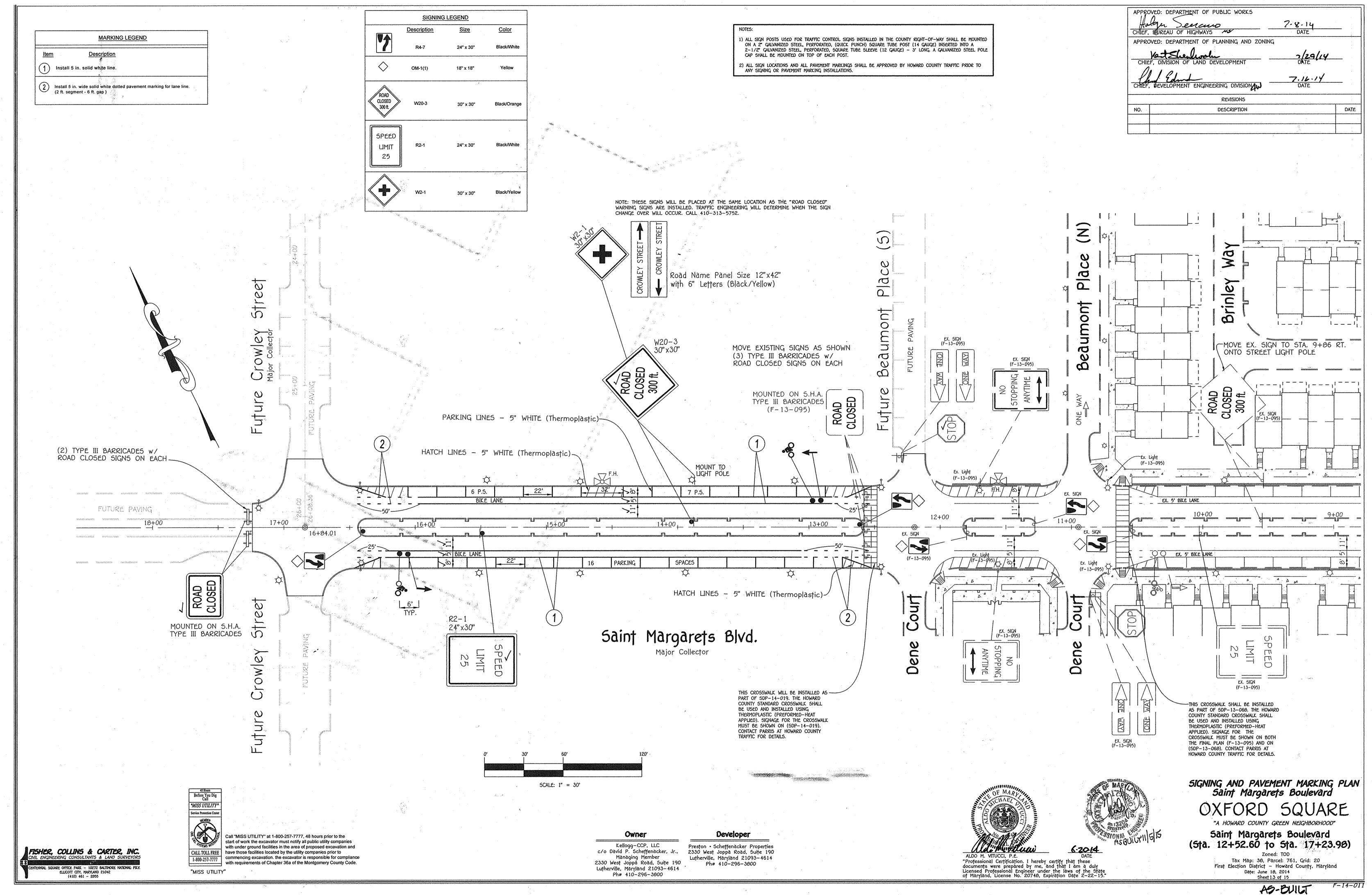
Zoned: TOD

Tax Map: 38, Parcel: 761, Grid: 20

First Election District - Howard County, Maryland

Date: June 18, 2014

Sheet 12 of 15



GREEN NEIGHBORHOOD COMPLIANCE CHECKLIST

Credit No.	Credit	Champion (Name, Role)	Requirement	Final Plan (F-14-011) GN Strategies	Documentation Location	Wax Peints	P.q.	instad
	Innovative / Integra	ited Design Proce				4		4
A-1	Green Development Plan	PCM/Petitoner; HCM/Panners	Shows how plans meet criteria, includes checklist, natural resource inventory	Provide documentation	GN Plan GN Report	RBQ'D		
A-2	interdisciplinary Project Team	PCMPetitoner	and energy analysis Includes U.S. Green	The design team includes a LEED AP professional, an ecologist, a civil engineer, an architect and landscape architect.	GN Pan GN Report	REQ'D		
A-3	Third Party Certification	PCW/Petitoner	Certification of credits by independent LEED accredited professional	Alexander Design Studio	GN Plan GN Report	REQ'D		
A-4a	Innovative Design A	HCW/Ranners	Green Streets	Green Streets	GN Report Final Plan (F-14-011) Sheet 5	1		1
A-4b	Innovative Design B	HCWPlanners	Priority Parking for Fuel Efficient Cars	Reserve 5% for Priority Parking for Fuel Efficient Cars	GN Plan References: Sketch Plan (S-14-001)	1		1
A-4c	Innovative Design C	HCW/Hanners	Compact Development	Residential Development will exceed 20 DU /AC	GN Plan References: Sketch Plan (S-14-001)	1	,	1
A-4d	Innovative Design D	HOMPlanners	Walkable Streets	More than 80% building frontage oriented towards public spaces; Less than 20% service and garage openings to public spaces.	GN Plan Reference: Sketch Plan (S-14-001) SDP (SDP 12-075)	1		1
B B-1a	Location, Linkages Redevelopment Site	& Community Co HCWPlanners FCC/Civil	Reuse of previously developed site (minimum 25% existing impervious, with siding scale for credits based on amount or % impervious)	More than 25% area previously developed (former sand and gravel operation).	GN Plan Reference: Sketch Plan (S-14-001)	4	,	2
8-1b	Redevelopment Site (Brownfield)	NA	Brownfield cleanup of redevelopment site	N/A	NA	8		0
8-2	Historic Buildings	NA	Preserve, restore or rehabilitate historic properties.	N/A	NA ,	4		0
8-3a	Transit Access & Amenities for Reduced Auto Dependence (Stop)	HCWFlanners	Site is served by transit stop within 1/2 mile (1 point) or 1/4 mile (2 points) walk from property	Private Shuttle Service with 2 stops (100% DU within 1/4 mile walking distance)	GN Ran Reference: Sketch Ran (S-14-001) F Ran (F-13-095)	2		2
B-3b	Transit Access & Amenities for Reduced Auto Dependence (Shelter)	HCMPlanners	Provide county-specified transit shelter with benches and lighting at transit stop within 1/2 mile of property and provided pedestrian link to stop if	Provide HoCo transit approved shelter for private shuttle service	GN Plan Future Residential SDP Reference: Sketch Plan (S-14-001)	4	P	4
B-4	Proximity to Community Resources	N/A	Credit for 1/2 mile proximity to existing or proposed community resources such as schools, parks, library, post office, etc.		N/A	5	,	0
C-1	Compact, Complete Diversity of Uses	 e & Connected De HCWPlanners	velopment 1 point per different	Provide 3 Uses: Institutional, Ovic, Office	GN Flan	27	************	25
ζ,	Diversity of USES	PLAYER ALBERTS	footinger unfareauti landuse; minimum 100 sf for ech non-residential per DU. Minimum of 149,200 SF each of office, institutional, and civic use, per 1,492 DU	FIGURE 3 CSES. IISBIRDORIA, CAPA, CARCE	References: Sketch Plan (S-14-001) SDP (SDP-12-075)	>		•
C-2	Planned Service Area	HCM/Flanners	Locate the project within the Planned Service Area	The project is within the Planned Service Area	GN Plan	5		5
C-3a	Pedestrian System (Path)	HCMPlanners	Provide an off-site pathway/trail system with 2 connections to internal or external sidewalks, with minimal environmental impacts, long-term maintenance	Provide a shared use path system	GN Plan References: Sketch Plan (S-14-001) SDP (SDP-12-075)	2		2
C-35	Pedestrian System (Connections)	N/A	Provide an off-site pathw ay/trail connection	N/A	N/A	2		0
C-3c	Pedestrian System (Amenities)	HCM/Rlanners	Provide at least two different pedestrian experience features	Provide pedestrian amenities at trailheads, the lawn and school site	GN Plan References: Sketch Plan (S-14-001) SDP (SDP-12-075)	2		2
Ç-4	Connected On-site Street Netw ork	HOM/Planners	Provide a gridded street network	More than 75% connected streets	GN Ran GN Report References: Sketch Plan (S-14-001)	2	J	2
C-5	Parking does not exceed Required Minimum	HCM/Planners	Surface parking lots do not exceed required parking ratios (1 point); plan takes advantage of shared parking provisions parking structure provided (in deck or beneath building; does not include garages w ithin individual units) (4 points)	Provide common parking structures (4 points)	GN Report GN Plan References: Sketch Plan (S-14-001)	4	· .	4 / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 /
C-6	Exceed Mnimum Open Space Requirements	HCWPlanners	1 point for every 5% above required minimumopen space for the TOD zone. 1 point for every 10% of non-buildable HOA parcels above 50% of the site (up to 3 points).	space above the required minimum amenity space (TOD zoning regulations)	GN Plan References: Sketch Plan (S-14-001)	5		5
C-7	Green Spaces and Amenity Areas	HCWRanners	Open space along public/private roads	Rublically accessible open space will be provided at the nature trail and clubhouse and	GN Plan References:	2		2
			available for public use	pool.	Sketch Plan (S-14-001)			

440074 YASANADA		OCCUPATION CONTRACTOR	Process State Control of Association and Revision Association Control of Control of Association Control of Control of Control of Control			estat 🗪 weth.	purpoureous
D-1	Environmental Pres Stream Restoration	EcoScience	Restoration of degraded on-	Provide w etland restoration for 91,000 SF and	References:	52 16	39 16
l	or Wetland Creation			Stream restoration for intermittent stream	Sketch Plan (S-14-001)		
1	or Restoration		restoration of degraded wetland or creation of	segment ST-2 (100-120 FT of channel).			į.
			additional	4			
1			w etlands (sliding scale based on % or length of		Ì		
l			stream restored and % or		}		
			acres of w etland created				
D-2		EcoScience	or restored)	Provide Habitat Management Ran	0.6	4	4
0-2	Habitat Management Plan	Buoscience	that identifies, conserves	move nabiat watagetest nati	References: Sketch Plan (S-14-001)	4	*
-			and enhances natural				
		:	resources and ecological communities (may include	*			
		ļ	clean up of debris, removal	the w			
			of invasives, etc.)				
D-3	25% Steep Stope	N∕A	Protect all existing steep	NA 2	N/A	2	0
	Preservation		slopes as defined by			-	Ť
1			County regulations required; provide 25'				
1			minimum buffer at top of		İ		
D-4	15% Slope	FCC/Civil;	25% slope (2 points) Protect existing 15%+	Preserve between 51-75% of	GN Plan	4	3
	Preservation	HOMPlanners	slopes (protect minimum	15%-24.9% slopes	GN Report	7	Ů
}			1/2 acre, with sliding scale based on area or %	·	References: Sketch Plan (S-14-001)		
			protected)		Oncom Am (5-14-507)		
							<u></u>
D-5	Minimize Grading and	FCC/Civil; HCM/Planners	Minimize limit of disturbance: leave at least	Balance Cut and Fill on entire site 2 points	GN Flan	5	5
	Site Disturbance	raw markners	20% of site undisturbed (1	Minimize Retaining Walls 0 points No new > 25% Steep slopes- 1 point	GN Report References:		
			point), 30% (2 points), 40%	Leave more than 30% of site undisturbed 2	Sketch Plan (S-14-001)		
			(3 points); balancecut and fill on site (2 points);	points	.,		
			retaining w alls 3-5.9'		1.20		*
	9		(deduct 1 point) retaining w alls 6-8.9' (deduct 2	·			
			points), walls 9 and higher				
			(deduct 3 points), no new created steep slopes over				
			25% (1 point); amend soil				
		:	nutrients in turf and planting areas (1 point)				
				the contract			
D-6	Exceed Minimum Forest Conservation	EcoScience FCC/Civil:	1 point for every 10% of existing forest retained	Provide 5.25 acres of planting area (50% over afforestation obligation)	Reference: Final Plan (F-12-026)	5	5
	Requirements	HCW/Planners	above break even point; 1		Sketch Plan (S-14-001)		
			point for every 10% of on- site forest planted in		Sheets 2, 4, 5, 6, 7		
			excess of afforestation	·			
			obligation				***************************************
D-7	Save Trees above 12" Mnimum Caliper	NA	1 point for protecting each 25% of all specimen trees	ΝΆ	IVA .	4	Q
			(does not include specimen				
			trees within forest conservation area or within	٠.			
			forests that are being				
D-8a	Exceed Minimum	FCC/Civil;	75' buffer required for	75' buffer required for perennial and intermittent	Reference:	RECYD	
1	Stream Buffer	,	perennial and intermittent	streams inside PSA,	Final Flan (F-12-026)		
	Requirements		streams inside PSA, 100' buffer required for	The state of the s	Sketch Plan (S-14-001)		
			perennial and intermittent) ``			
D-8b	Exceed Minimum	EcoScience	streams outside PSA 2 points for each additional	Provide 150 FT Stream Buffer (75 FT enhanced	Reference:	6	. 6
	Stream Buffer	FCC/Civil;	25° of buffer provided in	buffer) 6 points	Final Flan (F-12-026)		
	Requirements	HCM/Planners	excess of requirements in D-8a outside w etland	·	Sketch Plan (S-14-001)		'
			buffer or floodplain				
D-9	Exceed Mnimum	EcoScience	2 points for each additional	NA	N/A	4	0
	Wetland Buffer	FCC/Cvil; HCM/Planners	25' of wetland buffer		44		
	Requirements	ic warranners	buffer outside stream buffer or floodplain				
D-10	Floodplain Buffer	NΑ	1 point for each 25' of	NA .	N/A	2	0 .
	\$40		buffer to floodplain outside required or provided				
E	Site Lands cape im	2200558500	w etland or stream buffer			10	3
E-1	Landscaping	NA NA	1 point for each 10%	Provide 20% increase in Landscape	GN Report	5	2
	exceeds Minimum Requirements and		increase in number of plants (must be native	Requirements	F-Plan (F-14-011) Sheet 11, 15		
	Reduces Heat Island	·	plants) provided above				,
	Effect .		total minimum required in Landscape Manual; retain				
1		,	or plant trees on south and				
			w est sides of buildings and increase trees within				
			parking areas and along				
			sidew alks and paths				
E-2	Native Plants	NΑ	1 point for 80%, 2 points	N/A	NA	3	0
			for 90%, 3 points for 100% of all plants native to within	() ()		,	
			200 miles of site	,	aug.		
E-3	No Invasive Flants	HCMFlanners	No plants that are on DNR, USDA or Cooperative	Will not plant invasive plants	GN Plan F Plan (F-14-011)	REQ'D	
1	1		Extension Service lists of		Sheet 10		· 4
	Į.	1	invasive plants		Reference: Sketch Plan (S-14-001)		
			,) SMCCH Mail (5-14-0011	,	
			·		i		
E-4	Limit Turf	HCM/Planners	Turf does not exceed 30% of unpaved site (1 point);	Will not plant conventional turf in densely shaded areas and on new ly created >25%	GN Plan Future SDP	2	1
E-4	Limit Turf		Turf does not exceed 30% of unpaved site (1 point); no turf on new created		GN Plan Future SDP Reference:	2	1
E-4	Limit Turf		Turf does not exceed 30% of unpaved site (1 point); no turf on new created steep slopes 25%+ or in densely shaded areas (1	shaded areas and on new ly created >25%	GN Plan Future SDP	2	. 1
E-4	Limit Turf		Turf does not exceed 30% of unpaved site (1 point); no turf on new created steep slopes 25%+ or in	shaded areas and on newly created >25% steep slopes	GN Plan Future SDP Reference:	2	. 1

<i>.</i> F F-1	Water Conservatio			Provide rainwater harvesting for school and	GN Report	≋ 17 ≅	1
F-1	Rainw ater Harvesting System	Straughan	Collect and make use of w ater runoff from minimum 50% of roof area; provide storage system and monitoring device and maintenance / management program	Provide rainw ater harvesting for school and recreational fields	GN Report Reference: Sketch (S-14-001) SDP (SDP-12-075)	5	
F-2	Water-Fermeable Walkw ays	N/A	Use w ater-permeable materials in 50% or more of pathways; provide maintenance program	N/A	N/A	4	(
F-3a	Low Impact Development (LID) Stormv ater Treatment	FCC/Civil	Meets minimum Design Manual requirements; no dry ponds allow ed	No dry ponds	GN Plan F Plan (F-14-011) Sheets 3, 4, 9, 12 Reference: Sketch Plan (S-14-001)	REQ'D	
F-3b	Low Impact Development (LID) Stormw ater Treatment	FOC/Civil	Exceeds Design Manual requirements; maximize use of bioretention (esp. for parking lots), rain gardens, rain barrels, stormw ater w etlands, green roof, etc.	Will provide more than 51% water quality volume stored and infiltrated/re-used On-Site	GN Plan GN Report F Plan (F-14-011) Sheets 3, 4, 9, 12 Reference: Sketch Plan (S-14-001)	8	6
G -1	Energy Efficiency Light Pollution Reduction	FCC/CV/I; HCMPanners	Shield all site lighting fixtures to reduce light and spillover below county code requirements; install sensors or timers on all exterior site lighting fixtures	N/A	N/A	4 4	G
G-2	Solar Orientation	N/A	Orient 50% (1 point) or 75% (2 points) or 100% (3 points) of buildings to make available for solar strategies	N/A .	N/A	3	C
G-3	Infrastructure Energy Efficiency	N/A	Select high efficiency fixtures for parking lot and other site light fixtures	N/A	WA	· 6	· · · ·
			ent / Waste Management			17	7
	Environmentally Preferable Site Products	Straughan FCC/Civil; HCM/Planners	including: recycled materials (concrete, asphalt, tires, plastic, etc.), materials with recycled content, salvaged or engineered materials;	Use 26%-50% environmentally preferrable materials	GN Pan GN Report	8	C
	Reduce Heat-Island Effect of Paving	№	Use light-colored or high albedo materials and/or porous paving with a minimum Solar Reflective Index of 0.6 or over for at least 30% of the site hardscape	N/A	N/A	2	C
н-3	Site Construction Waste Management	Straughan	Develop and implement a construction waste management plan to divert, reuse, recycle or reduce the amount of site material sent to the landfill by 25% (2 points) or 50% (3 points) or 75% (4 points)		GN Report	4	4
	Regionally Provided Materials	Straughan FCC/Cvil; HCWPlanners	20% of common and public infrastructure materials from within 200 miles	Use regionally produced materials for 20% of total site materials	GN Report	,3	3
	Operations and Ma HOA Documents	intenance Educati Straughan;	include information about green site features and maintenance requirements in HOA documents	Provide HOA document	Under review with SDF-13-068	0 RBQ'D	0
	Maintenance Manual for Ow ner / HOA / Manager	Straughan	Provide a manual that includes information on how to maintain the green features of the site, including paving materials, landscaping and stormwater management LID and encourages additional green activities such as recycling,	Provide manual	Under review with SDR-13-068	REQ'D	
13	Public Awareness of Sustainable Community	Straughan; HCM	gardening, etc. Develop a program to advertise the environmental benefits of the community	Implement public aw areness strategy	Under review with SDP-13-068	REQ'D	
			TOTAL	GREEN NEIGHBORHOOD SITE POINTS		167	9
				its required to obtain Green Neighborhood			9,
		\sqrt{4}	Number of pon	Allocations		90	

LEED ACCREDITED PROFESSIONAL CERTIFICATE
GREEN NEIGHBORHOOD PLAN FOR SITES APPROVED: DEPARTMENT OF PLANNING AND ZONING 7/29/14 2.16.14 DESCRIPTION DATE

APPROVED

HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING GREEN NEIGHBORHOOD PLAN FOR SITES

No. 10439208 CHRUES AVEXA-1040 CRESS OFT 410-465-8707

Name Organization AVEXA-0 DESIGN STORE

Submission (mark "X" w here applicable): X Final Plan (F-14-011)

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS nial square office park — 10272 Baltimore national pike ellicott city, maryland 21042 (410) 461 — 2855

hord | coplan | macht 750 E. Pratt Street, Suite 1100 Baltimore MD 21202 410.837.7311 | www.hcm2.com Hord Coplon Macht, Inc. 2014

Kellogg-CCP, LLC
c/o David P. Scheffenacker, Jr.,
Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph# 410-296-3800

Preston • Scheffenacker Properties 2330 West Joppa Road, Suite 190 Lutherville. Maryland 21093—4614 Ph# 410—296—3800

"Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20740, Expiration Date 2-22-15."

GREEN NEIGHBORHOOD PLAN

"A HOWARD COUNTY GREEN NEIGHBORHOOD"

Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

Zoned: TOD

Tax Map: 30, Parcel: 761, Grid: 20

First Election District - Howard County, Maryland

Date: June 10, 2014

Sheet 14 of 15

GREEN NEIGHBORHOOD NOTES:

- THE DESIGN AND DEVELOPMENT TEAM INCLUDES A LEED AP (MATTHEW FITZSIMMONS- HORD COPLAN MACHT), ENVIRONMENTAL PROFESSIONAL (JOHN CANOLES- ECO-SCIENCE PROFESSIONALS, INC.), LANDSCAPE ARCHITECT (JOSH KILRAIN- HORD COPLAN MACHT) AND AN ENGINEER (ALDO VITUCCI- FISHER, COLLINS & CARTER INC.)
- THE THIRD PARTY CERTIFICATION IS PROVIDED BY CHARLES ALEXANDER, LEED-AP OF ALEXANDER DESIGN STUDIOS.
- THE 111.1 ACRES GREEN NEIGHBORHOOD BOUNDARY AREA CONSISTS OF 28.4 ACRES OF PREVIOUSLY DEVELOPED LAND (25.6% OF THE
- OXFORD SQUARE WILL PROVIDE TWO TRANSIT STOPS FOR THE PROPOSED PRIVATE SHUTTLE SERVICE CONNECTING OXFORD SQUARE TO THE DORSEY MARC COMMUTER RAIL STATION. THE STOPS WILL BE WITHIN 1/4 WALKING DISTANCE TO ALL DWELLING UNITS.

OXFORD SQUARE WILL PROVIDE ONE SHELTER AT ONE OF THE PRIVATE SHUTTLE STOPS. THE SHELTER WILL COMPLY WITH COUNTY

- -APPROVED CRITERIA INCLUDING BENCHES AND LIGHTING.
- OXFORD SQUARE WILL PROVIDE THREE DIVERSE USES OTHER THAN RESIDENTIAL: INSTITUTIONAL (MIDDLE SCHOOL BUILDING AND OUTDOOR CLASSROOM SPACE, ELEMENTARY SCHOOL) AND CIVIC (SCHOOL'S RECREATIONAL PLAYING FIELDS AND
- OXFORD SQUARE IS LOCATED WITHIN THE EXISTING PLANNED WATER AND SEWER SERVICE AREA.
- OXFORD SQUARE WILL PROVIDE A MINIMUM OF TWO PEDESTRIAN SYSTEM AMENITY EXPERIENCES: 1) SHARED USE PATH AND NATURE TRAIL (TRAIL SIGNS AND MARKERS, BENCHES, LITTER RECEPTACLES, INFORMÁTIONAL SIGNS, BIKE RACKS), 2) THE LAWN (BENCHES, EXTERIOR LIGHTING, SHADE TREES, INFORMATIONAL SIGNS), 3) RESIDENTIAL COURTYARDS AND MEWS (BENCHES), AND 4) SCHOOL SITES (PLAYING FIELDS, BENCHES, BIKE RACKS)
- OXFORD SQUARE WILL PROVIDE A MINIMUM 75 FT ENHANCED STREAM BUFFER.
- OXFORD SQUARE WILL NOT PLANT INVASIVE PLANTS.
- OXFORD SQUARE WILL NOT PLANT TURF IN DENSELY SHADED AREAS.
- OXFORD SQUARE WILL PROVIDE AT LEAST 51% WATER QUALITY VOLUME STORED AND INFILTRATED/RE-USED ON-SITE.

GREEN NEIGHBORHOOD CALCULATIONS & TABLES:

A-4b Priority Parking for Low-Emitting and Fuel Efficient Vehicles

3,459 Spaces Total Number of Off-Street Parking Spaces: Total Number of Proposed Preferred Parking Spaces: 173 Spaces Percent of Preferred Parking Spaces:

A-4c Compact Development

Total Dwelling Units: 1,492 DU Residential Land Area: 41.0 AC 36.39 DU/AC

A-4d Walkable Streets

Length of Buildings Frontage Oriented Towards the Public Space: 10,135 FT Total Length of Building Frontage: 11,426 FT % of Building Frontage Oriented Towards the Public Spaces: 754 FT Length of Building Frontage with Service or Garage Openings:

Total Length of Building Frontage Oriented Towards Public Spaces 10,889 FT (including Service and Garage openings): % of Building Frontage with Service or Garage Openings:

B-1a Redevelopment Site

111.1 Acres Gross Site Area: 28.4 Acres Area of Existing Development (Impervious Area): Percent of Previously Developed: 25.6%

B-3a Transit Access & Amenities for Reduced Auto Dependence (Stop)

Residential Buildings within 1/4 Mile Percent of all Units All Buildings 1,492 DU

C-1 Diversity of Uses

Residential Uses Apartments and Townhouses		Number of Uni	ts	Percent of Total Units	
		1,492 DU		100%	
Nonresidentia	Uses	Area		SF per Dwelling Unit	
Office		154,000	SF	103 SF/DU	
Institutional:	Middle School ¹	95,747	SF		
	Middle School Outdoor Classroom Space ¹ Elementary School	2,500 101,014			
	Institutional Subtota			134 SF/DU	
Civic:	Recreational Playing Fields (School Site) ¹	236,139	SF		
	Northern Loop Shared-Use Path (8 FT wide) and Trail heads ²	19,504	SF		
	Southern Loop Shared-Use Path (8 FT wide) and Trail heads	9,240	SF	:	
	Civic Subtota	l: 264,883	SF	178 SF/DU	

¹ Revised per the approved Middle School SDP (SDP-12-075) ² 12,801 SF of Shared-Use Path will be constructed on Middle School site (SDP-12-075)

C-3a Pedestrian System (Paths and Trails)

Northern Shared Use Path:

Width of Path: 8 FT Length: 2,438 FT (0.46 Miles)

Northern Shared Use Path:

Mulch Nature Trail

Length: 1,155 FT (0.22 Miles) Width of Path: 5 FT Length: 595 FT

Width of Path: 8 FT

C-4 Street Connections

Street Name / ID	Street Length	Qualifying Street
Saint Margarets Boulevard	1,684 FT	Yes
Banbury Drive	2,589 FT	Yes
Road A	220 FT	No
Road B	514 FT	No
Road C	228 FT	No
Road D	740 FT	Yes
Road E (North and South)	1,450 FT	Yes
Road F	1,016 FT	Partial
Road G	228 FT	No
Road H	228 FT	No
Road J	465 FT	Yes
Road I	245 FT	No
Summary		
Total Street Length:	9,607 FT	

Total Connected Street Length: 7,393 FT Percent Connected Streets: (F-14-011) Note: Final Plan (f-14 001) contributes +/-471 linear feet of Saint Margarets Boulevard to the complete build out

(per Sketch Plan (S-14-001)) Street Names are based on the submitted Sketch Plan (S-14-001),

C-5 Parking Does Not Exceed Required Minimum

	Complete Build-Out	F- Plan		
Number of Surface Parking Required:	3,647 spaces	0 spaces		
Number of Spaces Provided:	4,592 spaces	29 31 spaces		
Number of Shared Spaces (Public On-Street):	99 spaces	29 31 spaces		
Number of Shared Spaces (Private On-Street):	170 spaces	0 spaces		
Number of Spaces within a Common Parking Structure:	2,759 spaces	0 spaces		
Number of Spaces within Private / Integral Garages:	470 spaces	0 spaces		
Number of Spaces in Surface Parking Lots:	700 spaces	0 spaces		
Number of Driveway Spaces:	394 spaces	0 spaces		

Note: Complete Build Out Calculations are based on the submitted Sketch Plan (S-14-001),

C-6 Exceed Minimum Open Space

Net Acreage:	101.6 AC
Required Amenity Space (TOD: 10% of Net Acreage):	10.2 AC
Provided Amenity Space:	15.7 AC
Percent Increase above the Minimum Required:	53.9 %

C-7 Green Spaces and Amenity Areas

, .	,		
Parcel	Road Frontage	Amenity Type.	Amenity Area
Open Space 1: The Nature Trail (Future SDP)	160 FT	Nature	31,266 SF
		Trail,	(0.72 AC)
Y		Benches,	
		Trail	
		Signage,	
		Educational 5	gnage
Open Space 2: Pool House and Pool (SDP-13-068)	+/-138 FT	Pool house,	11,282 SF
	(length	Pool,	(0.26 AC)
	along	Fitness	
	Private	Room, and	
	Road 'B')	Warming	
		Vitchon	•

D-4 15% Slope Preservation

	Complete Build C
Total Area of Slopes 15-24.9%:	504,072 SF
Area of Undisturbed Slopes 15-24.9%:	289,178 SF
Donard of Indistruted Clares	E7 A D/

LODs accumulated from the entire development.

Complete Build Out includes Approved Sketch Plan (S-14-001), Approved Final Plan (F-12-026), Approved Middle School SDP (SDP-12-075) and future environmental restoration work.

F Plan submission land area is located within the Complete Build Out LOD therefore there are no impacts to undisturbed areas.

D-5 Minimize Grading and Site Disturbance

	Complete Build Out	F-Plan ¹
Gross Area of Site (GN Boundary)	111.1 AC	
Existing Impervious Cover	28.4 AC	•
Area of Site	82.7 AC	
Area of Site to Remain Undisturbed	28.4 AC	
Precent of Site to Remain Undistrubed:	34.3 %	
Ratio of Cut to Fill:	1.13 Ratio	0.78 Rat

Note: Complete Build Out Calculations are based on the aggregate greatest extent of LOD's from the submitted Sketch Plan (S-14-001), Approved Final Plan (F-12-026) and Approved Middle School SDP (SDP-12-075).

 1 F Plan submission land area is located within the Complete Build Out LOD therefore there are no impacts

² Excess fill dirt will be utilized on future SDp submission and will not be hauled off site

D-6 Exceed Minimum Forest Conservation Requirements

Afforestation Obligation:	3.50 AC
Afforestation Provided in Excess of Obligation:	1.75 AC
Percentage of Provided in Excess of Obligation:	50.00 %

D-8b Exceed Minimum Stream Buffer Requirements

Total Stream Buffer Width:	150	F
Width of Buffer Exceeding Requirements:	75	F
Total Length of Stream Buffer:	1,984.2	F
Length of Stream Buffer Outside Other Buffers:	1,352.3	F
Percent of Stream Buffer Outside Other Buffers:	68.2	9

E-1 Landscaping

Plants Required	4	Shade Trees	Evergreen	Shrubs	Total	Percent
Number of Plants Required by Landscape Manual		24	0	0	24	
Number Excess Plants Required for GN Credit	•	5	0	0	5	20.8
Landscape Manual and GN Requirements		29	0	0	29	

Plants Provided

	A)		Evergreen (Substitute)	Other Trees (Substitute)	65b.	Shrub (Substitute)	T.A. 1
	Shade Trees	Evergreen	(20D201016)	(Substitute)	Snrubs	(Substitute)	Tota
Number of Plants Provided to Meet Landscape Manual Requirements	24	0	0	0	0	0	24
Number of Plants Provided to Meet GN Credits	10	0	0	0	0	0	10
 Total Number of Plants Provided	34	. 0	0	0	0	0	34

1. Excess Native Shade Trees (bonded): (10 BNH)

2. This plan provides 5 additional "Excess Native Shade Trees" to satisfy the 20% Goal The additional "Excess Native Shade Trees" will supplement shortages on other plan submissions.

"Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly

GREEN NEIGHBORHOOD PLAN

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

GREEN NEIGHBORHOOD PLAN FOR SITES

LEED ACCREDITED PROFESSIONAL CERTIFICATE

GREEN NEIGHBORHOOD PLAN FOR SITES

DESCRIPTION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

7-24-14

7.16.14

DATE

"A HOWARD COUNTY GREEN NEIGHBORHOOD" Saint Margarets Boulevard (5ta. 12+52.60 to 5ta. 17+23.98)

> Tax Map: 38, Parcel: 761, Grid: 20 First Election District - Howard County, Maryland Date: June 18, 2014

Owner

Kellogg-CCP, LLC c/o David P. Scheffenacker, Jr., Managing Member 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 Ph# 410-296-3800

Preston · Scheffenacker Properties 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 Ph# 410-296-3800

410.837.7311 | www.hcm2.com

Hord Coplan Macht, Inc. 2014